

Robert Greene Steme Edward J. Kessler Jorge A. Goldstein David K.S. Cornwell Robert W. Esmond Iracy-Gene G. Durkin Michele A. Cimbala Michael B. Ray Robert E. Sokohl Eric K. Steffe Michael Q. Lee Steven R. Ludwig John M. Covert Linda E. Alcom Robert C. Millonig Lawrence B. Bugalisky Donald J. Featherstone Michael V. Messinger Judith U. Kim Timothy J. Shea, Jr. Patrick E. Garrett Jeffery T. Helvey-Heidi L. Kraus Crystal D. Sayles Edward W. Yee Albert L. Fernovi Peter A. Jackman Molly A. McCall Teresa U. Medler Jeffrey S. Weaver Kendrick P. Patreson Olicent L. Capuano Albert J. Fasulo II* Eldora Ellison Floyd W. Russell Swindell

Romas L. riala Brian J. Del Buono' Virgil Lee Beaston' Reginald D. Lucas Kimberly N. Reddick Theodore A. Wood Elizabeth J. Haanes Bruce E. Chalker Joseph S. Ostroff Frank R. Cottingham' Christine M. Lhuller Rae Lynn Prengaman Jane Shershenovich' Lawrence J. Carroll'

Senior Counsel Samuel L. Fox Kenneth C. Bass III Registered Patent Agents Karen R. Markowicz Andrea J. Kamage Nancy J. Leith Joseph M. Conrad III Ann E. Summerfield Helene C. Carlson Gaby L. Longsworth Matthew J. Dowd Aaron L. Schwartz Angelique G. Uy Bord A. Matvenko Mary B. Tung

*Admitted only in Maryland *Admitted only in Virginia •Admitted only in Texas

April 22, 2002

WRITER'S DIRECT NUMBER: (202) 371-2674
INTERNET ADDRESS: MLEE@SKGF.COM

Art Unit: 2631

Commissioner for Patents Washington, D.C. 20231

Re:

U.S. Utility Patent Application

Appl. No. 09/525,615; Filed: March 14, 2000

For:

Method, System and Apparatus for Balanced Frequency Up-Conversion of a Baseband Signal and 4-Phase Receiver and Transceiver

Embodiments (as amended)

Inventors:

Sorrells et al.

Our Ref:

1744.0450003/MQL/JTH

Sir:

Transmitted herewith for appropriate action are the following documents:

- 1. Information Disclosure Statement;
- 2. A list of the cited documents on Forms PTO-1449 (56 pages);
- 3. A copy of the seven-hundred and seventy-six (776) documents cited on Forms PTO-1449;
- 4. A compact Disc labeled "Sterne1B" in PDF format;
- 5. A compact Disc labeled "Sterne2B" in PDF format; and
- 6. Return postcard.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are

Commissioner for Patents April 22, 2002 Page 2

necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

KESSLER, GOLDSTEIN & FOX P.L.L.C.

Michael Q. Lee

Attorney for Applicants Registration No. 35,239

JTH/slw Enclosures

SKGF_DC1:5115.1

This statement should not be construed as a representation that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

- Applicants have checked the appropriate boxes below.
- 1. This Information Disclosure Statement is being filed before the mailing of a first action on the merits. No statement or fee is required.
- This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection or Notice of Allowance.
 - □ a. I hereby state that each item of information contained in this Information

 Disclosure Statement was cited in a communication from a

 foreign patent office in a counterpart foreign application not more
 than three months prior to the filing of this Information Disclosure

 Statement. 37 C.F.R. § 1.97(e)(1).
 - □ b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
 - □ c. Attached is our Check No. 32067 in the amount of \$_____ in payment of the fee under 37 C.F.R. § 1.17(p).
- □ 3. This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. A separate Petition to the Group Director, requesting consideration of this Information Disclosure Statement, is concurrently submitted herewith,

along with our Check No.	in the amount of \$	in payment
of the fee under 37 C.F.R. § 1.17(i)		

- □ a. I hereby state that each item of information contained in this Information

 Disclosure Statement was cited in a communication from a

 foreign patent office in a counterpart foreign application not more
 than three months prior to the filing of this Information Disclosure

 Statement. 37 C.F.R. § 1.97(e)(1).
- □ b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- □ 4. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- Solution Series Serie
 - Document AJ1 (DE 42 37 692 C1) appears to be a receiver for a digital radio signal. The corresponding U.S. Patent No. 5,493,721 is enclosed as document AG28 on the attached PTO-1449.
 - Document AK1 (EP 0 035 166 A1) appears to describe a digitized receiver. A copy of the English language abstract of document AK1 is enclosed as document AQ8 on the attached PTO-1449.
 - Document AJ6 (EP 0 785 635 A1) appears to describe a method and apparatus for frequency diversity transmission using a plurality of uncorrelated

- carriers. A copy of the English language abstract of document AJ6 is enclosed as document AP8 on the attached PTO-1449.
- Document AK7 (FR 2 743 231 A1) is the corresponding French application of document AJ6 (EP 0 785 635 A1), which is described above.
- Document AJ8 (JP 2-39632) appears to describe a transmitter for frequency diversity. A copy of the English language abstract of document AJ8 is enclosed as document AO8 on the attached PTO-1449.
- Document AK8 (JP 2-131629) appears to describe a transmitter-receiver for frequency diversity. A copy of the English language abstract of document AK8 is enclosed as document AN8 on the attached PTO-1449.
- Document AL8 (JP 2-276351) appears to describe an FSK demodulating circuit.

 A copy of the English language abstract of document AL8 is enclosed as document AR7 on the attached PTO-1449.
- Document AK11 (FR 2245130) appears to describe a converter. A partial English language translation of document AK11 is enclosed as document AP50 on the attached PTO-1449.
- Document AL11 (DE 3541031) appears to describe a method and device for demodulating high-frequency modulated signals. An English translation of document AL11 is enclosed as document AR50 on the attached PTO-1449.
- Document AM11 (EP 0 732 803) appears to describe a procedure and device for demodulation by sampling. An English translation of document AM11 is enclosed as document AN51 on the attached PTO-1449.
- Document AJ12 (DE 19735798) appears to describe a transceiver. An English translation of document AJ12 is enclosed as document AP51 on the attached PTO-1449.
- Document AM13 (JP 56-114451) appears to describe a system for diversity radio transmission. The corresponding U.S. Patent No. 4,363,132 is enclosed as document AF8 on the attached PTO-1449.

- Document AJ14 (JP 8-32556) appears to describe a data transmitter-receiver. A copy of the English language abstract of document AJ14 is enclosed as document AO52 on the attached PTO-1449.
- Document AK14 (JP 8-139524) appears to describe a frequency converting circuit and radio communication device. A copy of the English language abstract of document AK14 is enclosed as document AP52 on the attached PTO-1449.
- Document AL14 (JP 59-144249) appears to describe a pulse signal transmission system. A copy of the English language abstract of document AL14 is enclosed as document AQ52 on the attached PTO-1449.
- Document AM14 (JP 63-54002) appears to describe a microwave burst signal generator which incorporates a FET frequency multiplier. A copy of the English language abstract of document AM14 is enclosed as document AR52 on the attached PTO-1449.
- Document AJ15 (JP 6-237276) appears to describe a quadrature modulator. A copy of the English language abstract of document AJ15 is enclosed as document AN53 on the attached PTO-1449.
- Document AK15 (JP 8-23359) appears to describe a digital quadrature modulation device. A copy of the English language abstract of document AK15 is enclosed as document AO53 on the attached PTO-1449.
- Document AL15 (JP 47-2314) appears to describe a demodulator. A partial English language translation of document AL15 is enclosed as document AP53 on the attached PTO-1449.
- Document AM15 (JP 58-7903) appears to describe a switched capacitor modulator. A partial English language translation of document AM15 is enclosed as document AQ53 on the attached PTO-1449.
- Document AJ16 (JP 58-133004) appears to describe an amplitude detector. A copy of the English language abstract of document AJ16 is enclosed as document AR53 on the attached PTO-1449.

- Document AK16 (JP 60-58705) appears to describe a frequency converting circuit. A copy of the English language abstract of document AK16 is enclosed as document AN54 on the attached PTO-1449.
- Document AL16 (JP 4-123614) appears to describe a level converting circuit. A copy of the English language abstract of document AL16 is enclosed as document AO54 on the attached PTO-1449.
- Document AM16 (JP 4-127601) appears to describe a frequency conversion circuit. A copy of the English language abstract of document AM16 is enclosed as document AP54 on the attached PTO-1449.
- Document AJ17 (JP 5-175730) appears to describe a time division direct receiver. A copy of the English language abstract of document AJ17 is enclosed as document AQ54 on the attached PTO-1449.
- Document AK17 (JP 5-175734) appears to describe an FM demodulator. A copy of the English language abstract of document AK17 is enclosed as document AR54 on the attached PTO-1449.
- Document AL17 (JP 7-154344) appears to describe a receiver for receiving modulated carrier signals and an IQ mixer/demodulator using it's receiving constitution. A copy of the English language abstract of document AL17 is enclosed as document AN55 on the attached PTO-1449.
- Document AM17 (JP 7-307620) appears to describe a bottom detection circuit.

 A copy of the English language abstract of document AM17 is enclosed as document AO55 on the attached PTO-1449.
- Document AJ18 (JP 55-66057) appears to describe a bar-code detection circuit.

 A copy of the English language abstract of document AJ18 is enclosed as document AQ55 on the attached PTO-1449.
- Document AK18 (JP 63-65587) appears to describe a wireless light pen device.

 A copy of the English language abstract of document AK18 is enclosed as document AR55 on the attached PTO-1449.
- Document AL18 (JP 63-153691) appears to describe a data transfer for a semiconductor data carrier system. A copy of the English language

abstract of document AL18 is enclosed as document AN56 on the attached PTO-1449.

- Document AQ50 (Fest et al.) appears to discuss analog-digital converters. An English translation of document AQ50 is enclosed as document AQ51 on the attached PTO-1449.
- Document AQ51 (Miki et al.) appears to describe modulation systems. A partial English-language translation of document AQ51 is enclosed as document AR51 on the attached PTO-1449.
- □ 6. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. _____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

ESSLER, GOLDSTEIN & FOX P.L.L.C.

Michael Q. Lee

Attorney for Applicants Registration No. 35,239

1100 New York Avenue, N.W. Suite 600

Washington, D.C. 20005-3934

(202) 371-2600

INFORMATION DISCLOSURE STATEMENT

Page 1 of 56 ATTY. DOCKET NO. 1744.0450003 APPLICATION NO. 09/525,615 APPLICANT Sorrells et al. FILING DATE GROUP

) X (arch 14, 2000		2631		
EXAMINER					U.S. P	ATEN	IT DOCUMENTS	-		-	
EXAMINER INITIAL			CUMENT MBER	DAT		NAN			CLASS	SUB- CLASS	FILING DATE
	AA1	2,0	57,613	10/1	936	Gar	dner		250	8	
	AB1	2,2	41,078	05/1	941	Vree	eland		179	15	
	AC1	2,2	70,385	01/1	942	Skill	man		179	15	
	AD1	2,2	83,575	05/1	942	Rob	erts		250	6	
	AE1	2,3	58,152	09/1	944	Ear)		179	171.5	
	AF1	2,4	10,350	10/1	946		n et al.	-	179	15	
	AG1	2,4	51,430	10/1		Baro	one		250	8	<u> </u>
	AH1	2,46	52,069	02/1	949	<u> </u>	tterjea et al.		250	17	
	Al1		52,181	02/1			sselfinger		250	17	
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·-·	AJ1	DE	42 37 692 C1	<u></u>	03/1994		DE		H04B	1/26	N
-	AK1	EP	0 035 166 A1		09/1981		EP		H04B	1/26	N
	AL1	EP	0 193 899 B1		06/1990		EP	_	G01S	7/52	N/
	AM1	EP	0 380 351 A2		08/1990		EP		нозн	17/04	N/
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	AN	1	Aghvami, H. e Fourth Interna 153 (October	ational	Conference	Satel on Sa	lites Using the Highly E atellite Systems for Mob	Elliptic oile Co	Orbits- The UI	K T-SAT Mot and Navigat	oile Payload," ion, IEE, pp. 147-
	AO	1	Akers, N.P. e 49 (January 1	<i>t al.</i> , "I 986).	RF Sampling	Gate	s: a Brief Review," <i>IEE</i>	Proced	edings, IEE, V	ol. 133, Part	A, No. 1, pp. 45-
	AP	1	Al-Ahmad, H Techniques fo IEE, pp. 4/1-4	or CEF	RS and T-SA	T," <i>El</i> e	quency Correction for a ectronics Division Collo	Non-G quium	Geostationary on Low Noise	Communicat Oscillators a	ions Satellite. and Synthesizers
	AQ	1	Ali, I. <i>et al.</i> , "D 46, No. 3, pp.	opple 309-3	r Characteriz 13 (March 19	zation 998).	for LEO Satellites," <i>IEE</i>	EE Trai	nsactions on (Communicati	ons, IEEE, Vol.
	AR	1	Allan, D.W., ": Stability, IEEE	Statist	ics of Atomic 221-230 (Feb	: Freq	uency Standards," <i>Proc</i> 1966).	ceedin	gs Of The IEE	E Special Iss	sue on Frequenc
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INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO. 1744.0450003 APPLICATION NO. 09/525,615

APPLICANT Sorrells et al.

FILING DATE GROUP

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	AA2	2,47	2,798	06/19	949	Fred	endali		178	44	
	AB2	2,49	7,859	02/19	950	Boug	htwood et al.	**	250	8	
· <u>·</u> ····	AC2	2,49	9,279	02/19	950	Pete	rson		332	41	
	AD2	2,80	2,208	08/19	57	Hobb	os		343	176	
	AE2	2,98	35,875	05/19	961	Griso	lale et al.		343	100	
	AF2	3,02	23,309	02/19	962	Foul	(es		250	17	
	AG2	3,06	9,679	12/19	962	Swee	eney <i>et al</i> .		343	200	
	AH2	3,10	14,393	09/19	963	Voge	lman		343	200	
	AI2	3,11	4,106	12/19	963	McM	anus		325	56	1
<u> </u>					FOREIGN	N PATI	ENT DOCUMENTS		_		<u>.</u>
EXAMINER INITIAL		DOG	CUMENT NUM	BER	DATE		COUNTRY		CLASS	SUB- CLASS	TRANSLATION
	AJ2	EP (380 351 A3		02/1991		EP		нозн	17/04	N/
	AK2	EP (0 411 840 A2		02/1991		EP		G01R	33/36	N//
	AL2	EP (0 411 840 A3		07/1991		EP		G01R	33/36	N//
	AM2	EP (0 411 840 B1		10/1995		EP		G01R	33/36	N//
			OTHE	R (Inc	luding Auti	hor, T	tle, Date, Pertinent Pa	ges, et	c.)	<u> </u>	1
	AN	2	Allstot, D.J. e SC-13, No. 6				pacitor Ladder Filters," / 1978).	EEE Jo	ournal of Sol	id-State Circ	uits, IEEE, Vol.
	AO	2	Allstot, D.J. a Filtering Systo	nd Bla ems,"	ck Jr. W.C., Proceedings	"Tech of the	nological Design Consid IEEE, IEEE, Vol. 71, N	deratior o. 8, pp	ns for Monol o. 967-986 (/	ithic MOS Sv August 1983)	vitched-Capacitor).
	АР	<u>2</u>					zation and Modeling for 55, No. 6, pp. 981-997 (ill Aperture T	erminals,"
	AQ	2	Andreyev, G., Propagation i 43, No. 12, pp	n a Tu	rbulent Atmo	ospher	ase Distortions of Keyer e," <i>Telecommunications</i> 3).	d Millim s and R	eter-Wave t adio Engine	Signals in the ering, Scripta	e Case of a Technica, Vol.
	AR	2	Antonetti, A. o Publishing Co	e <i>t al.</i> , " ompan	'Optoelectro y, Vol. 21, N	nic Sa lo. 2, p	mpling in the Picosecon p. 211-214 (May 1977).	id Rang	e," Optics C	Communicatio	ons, North-Holland
EXAMINER	<u></u>		1						DATE CON	SIDERED	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

conformance and not considered. Include copy of this form with next communication to Applicant.

ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615

APPLICANT Sorrells et al.

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	AA3	+	8,117	01/19	964	King	et al.		332	22	1
	AB3	+	6,643	12/19		McN			325	40	
	AC3		8,694	06/19	966		pherd		325	145	
	AD3		3,598	05/19	968	Sand			325	163	
	AE3	3,38	4,822	05/19	968	Miya			325	30	
	AF3	+	4,718	07/19			eault		178	66	
	AG3	+	3,291	08/19	-	Pierr			340	347	
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	AJ3	EP (0 423 718 A2		04/1991		EP		H04N	7/01	N/.
	AK3	EP (423 718 A3		08/1992		EP		H04N	7/01	N/
	AL3	EP (0 486 095 A1		05/1992		EP		H03D	3/00	N/.
	АМЗ	EP () 486 095 B1		02/1997		EP		H03D	3/00	N/
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	AN	<u>3</u>	Austin, J. et a European Mid 1988).	ıl., "Do crowa	oppler Correc ve Conferenc	ction o ce, Mic	of the Telecommunicati crowave Exhibitions ar	ion Payl Id Publi	oad Oscillato shers Ltd., pp	rs in the UK ⁻). 851-857 (Si	T-SAT," <i>18th</i> eptember 12 - 15,
	AO	<u>3</u>	Auston, D.H., Institute of Ph	"Pico ysics,	second opto	electro	onic switching and gati . 101-103 (February 1	ing in si , 1975).	licon," <i>Applie</i> d	d Physics Let	tters, American
	AP	<u>3</u>	Baher, H., "Ti and Systems,	ansfe IEEE	r Functions f Circuits and	or Sw I Syste	itched-Capacitor and \ ems Society, Vol. CAS	Vave D -33, No	igital Filters," . 11, pp. 1138	<i>IEEE Transa</i> 3-1142 (Nove	ctions on Circuits mber 1986).
	AQ	<u>3</u>	Baines, R., "7 (May 1995).	he DS	SP Bottlenec	k," <i> El</i>	EE Communications M	lagazine	, IEEE Comn	nunications S	ociety, pp. 46-54
	AR	3	Banjo, O.P. a Electronics Lo	nd Vila	ar, E., "Binar IEE, Vol. 21	y Erro	or Probabilities on Eart 7, pp. 296-297 (March	h-Space 28, 198	e Links Subje 95).	ct to Scintillat	ion Fading,"
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FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
1744.0450003

APPLICATION NO.
09/525,615

APPLICANT
Sorrells et al.

FILING DATE

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	AA4	3,6	17,892	11/1	971	Haw	ley et al.		325	145	
	AB4	3,62	21,402	11/1	971	Gard	iner		328	37	-
	AC4	3,62	23,160	11/1	971	Giles	et al.		340	347 DA	
	AD4	3,62	26,417	12/1	971	Gilbe	ert		343	203	
	AE4	3,62	29,696	12/1	971	Barte	elink		324	57 R	
	AF4	3,66	52,268	05/19	972	Gan	s et al.		325	56	
	AG4	3,68	39,841	09/19	972	Bello	et al.		325	39	
	AH4	3,71	14,577	01/19	973	Haye	es		325	145	
	Al4	3,71	17,844	02/1	973	Barre	et <i>et al</i> .		340	5 R	
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	AJ4	EP (0 512 748 A2		11/1992		EP	-	H04N	9/64	N/A
	AK4	EP (0 512 748 A3		07/1993	,	EP		H04N	9/64	N/A
	AL4	EP (0 512 748 B1		11/1998		EP		H04N	9/64	N/A
	AM4	EP (0 548 542 A1		06/1993		EP		H03B	19/14	N/A
			ОТН	R (Inc	cluding Aut	hor, T	itle, Date, Pertinent P	ages,	etc.)		
	AN	4	Banjo, O.P. a Parameters," pp. 277-280 (Fifth I	nternational	Confe	dence of Slant Path Ar rence on Antennas and	mplitude d <i>Propa</i>	e Scintillations	on Various I 87) Part 2: P	Meteorological tropagation, IEE,
	AO	4	Paths and Im	pact o	n Communic	cation	nt and Modeling of Am Systems," <i>IEEE Trans</i> 780 (August 1986).	plitude actions	Scintillations on Communic	on Low-Eleva cations, IEEE	ation Earth-Space Communications
	AP	4	Banjo, O.P. e Fourth Interna	t al., "" ational	Tropospherio Conference	Ampl	itude Spectra Due to A tennas and Propagation	Absorpt on (ICA	ion and Scatte P 85), IEE, pp	ering in Earth). 77-82 (Apri	-Space Paths," I 16-19, 1985).
	AQ	4	Basili,P. et al. and Propagat	, "Cas ion, IE	e Study of Ir EE, Vol. 38,	ntense No. 1	Scintillation Events or pp. 107-113 (January	n the O' / 1990).	ΓS Path," <i>IEE</i>	E Transaction	ns on Antennas
	AR	4	Basili, P. et a Letters, IEE,	/., "Ob: √ol. 24	servation of I, No. 17, pp.	High (c ² and Turbulent Path l -1116 (August 18, 198	Length 18).	on OTS Spac	e-Earth Link,	" Electronics
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Page 5 of 56 ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT DATE NAME CLASS SUB-FILING DATE **NUMBER CLASS** AA5 3,735,048 05/1973 Tomsa et al. 15 BM 179 AB5 3,806,811 04/1974 Thompson 325 146 AC5 3,868,601 02/1975 MacAfee 332 45 AD5 3,949,300 04/1976 Sadler 325 31 AE5 3.967.202 06/1976 Batz 325 31 AF5 3,980,945 09/1976 **Bickford** 325 30 AG5 3,987,280 10/1976 Bauer 235 150.53 AH5 11/1976 Hirata 179 15 FD 3,991,277 AI5 01/1977 332 4,003,002 Snijders et al. 10 **FOREIGN PATENT DOCUMENTS EXAMINER** CLASS TRANSLATION INITIAL **DOCUMENT NUMBER** DATE COUNTRY SUB-CLASS AJ5 EP 0 632 288 A2 01/1995 G01S 13/75 N/A AK5 EP 0 632 288 A3 07/1996 FP G01S 13/75 N/A AL5 EP 0 696 854 A1 02/1996 EP H04B 1/26 N/A 7/02 N/A AM5 EP 0 782 275 A2 07/1997 EP H04B OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Blakey, J.R. et al., "Measurement of Atmospheric Millimetre-Wave Phase Scintillations in an Absorption AN <u>5</u> Region," Electronics Letters, IEE, Vol. 21, No. 11, pp. 486-487 (May 23, 1985). Burgueño, A. et al., "Influence of rain gauge integration time on the rain rate statistics used in microwave communications," annales des télècommunications, International Union of Radio Science, pp. 522-527 AO 5 (September/October 1988). Burgueño, A. et al., "Long-Term Joint Statistical Analysis of Duration and Intensity of Rainfall Rate with Application to Microwave Communications," Fifth International Conference on Antennas and Propagation (ICAP 87) Part 2: Propagation, IEE, pp. 198-201 (March 30 - April 2, 1987). AP <u>5</u> Burgueño, A. et al., "Long Term Statistics of Precipitation Rate Return Periods in the Context of Microwave AQ <u>5</u> Communications," Sixth International Conference on Antennas and Propagation (ICAP 89) Part 2: Propagation, IEE, pp. 297-301 (April 4-7, 1989).

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Burgueño, A. et al., "Spectral Analysis of 49 Years of Rainfall Rate and Relation to Fade Dynamics," *IEEE Transactions on Communications*, IEEE Communications Society, Vol. 38, No. 9, pp. 1359-1366 (September

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1990).

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ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615

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	AA6	4,01	3,966	03/1	977	Cam	pbell		325	;	363	
	AB6	4,01	9,140	04/1	977	Swe	rdlow		322		65	
	AC6	4,03	5,732	07/1	977	Lohr	mann		325	,	446	
	AD6	4,04	7,121	09/1	977	Cam	pbell		331		76	
	AE6	4,06	6,841	01/1	978	You	ng		178	}	66 R	
	AF6	4,06	6,919	01/1	978	Hun	ington		307		353	
	AG6	4,08	31,748	03/1	978	Batz			325	<u> </u>	56	
	AH6	4,13	0,765	12/1	978	Arak	elian <i>et al.</i>		307		220 R	<u> </u>
	Al6	4,13	0,806	12/1	978	Van	Gerwen et al.		325	5	487	
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EXAMINER INITIAL		DOG	CUMENT NUM	BER	DATE		COUNTRY		CL	ASS	SUB- CLASS	TRANSLATION
	AJ6	EP (785 635 A1		07/1997		EP		H04	\$В	1/713	No
	AK6	EP (795 978 A2		09/1997		EP		H04	‡L	5/06	N/A
	AL6	EP (0 837 565 A1		04/1998		EP		H04	\$B	1/69	N/A
*	AM6	EP (862 274 A1		09/1998		EP		HO	ВМ	1/06	N/A
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	AN	<u>6</u>	No. 12, pp. 12	238-12	240 (June 11	, 1998	or satellite slant path re				. ,	
	AO	<u>6</u>	Conference, I	EEE (Communicati	ion So	ciety, pp. 210-213 (Sep	tember	22-24	, 1993	1 Solid State). 	Circuits
	AP	<u>6</u>	Copy of Deck related subject	aratior at mat	of Michael der, 2 pages.	J. Buli	man filed in patent appi	lication	Ser. N	lo. 09/	176,022, whi	ch is directed to
	AQ	6	Copy of Declarelated subject				k filed in patent applica	ition Se	r. No.	09/176	5,022, which	is directed to
	AR	6	Copy of Deck subject matte			tz filed	in patent application S	er. No.	09/17	6,022,	which is dire	cted to related
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DIALOG File 347 (JAPIO) English Language Patent Abstract for JP 2-276351, 1 page (November 13, 1990 -

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	AA8	4,32	20,536	03/1	982	Dietr	ich	45	5	325		
	AB8	4,34	16,477	08/1	982	Gord	ly	45	5	257		
	AC8		55,401	10/1		+	a et al.	. 37		5		
	AD8		6,558	10/1		†	n et al.	36		724	<u> </u>	
	AE8		60,867	11/1		Gond		36		158		
	AF8		33,132	12/19		Colli		45		52	-	
	AG8 AH8	- 	35,217 70,572	01/1		 	er <i>et al.</i> and <i>et al.</i>	33		165		
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<u></u>	1 710	14,50	13,313	00/1			ENT DOCUMENTS	30	<u>'</u>	_333		
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	AJ8	JP 2	2-39632		02/1990		JP	но	4B	7/12	No	
	AK8	JP 2	2-131629		05/1990		JP	но	4B	7/12	No	
	AL8	JP 2	2-276351		11/1990		JP	но	4L	27/22	No	
	AM8	wo	80/01633 A1		08/1980		PCT	но	4 J	1/08	N/A	
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	AN	<u>8</u>	DIALOG File publication of			ish Lar	nguage Patent Abstract t	for JP 2-131	629, 1 _l	page (May 21	I, 1990 - Date of	
	AO	8	DIALOG File publication of	347 (. Fapplio	JAPIO) Engli cation).	ish Lar	nguage Patent Abstract (for JP 2-396	32, 1 pa	age (Februar	y 8, 1990 - Date of	
	AP	<u>8</u>	DIALOG File (December 2	348 (E 6, 199	European Pa 6 - Date of p	itents) publica	English Language Pater tion of application).	nt Abstract t	or EP 0	785 635 A1,	3 pages	
	AQ	<u>8</u>	DIALOG File 18, 1981 - Da				English Language Pater cation).	nt Abstract t	or EP 3	5166 A1, 2 p	ages (February	
	AR	<u>8</u>	"DSO takes s 77 and 79 (M	ampli arch 1	ng rate to 1 (987).	Ghz," <i>l</i>	Electronic Engineering, I	Morgan Gra	mpian F	Publishers, Vo	ol. 59, No. 723, pp.	
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	AA9	4,39	92,255	07/19	983	Del	Giudice		455	328		
	AB9	4,43	30,629	02/1	984	Betz	l et al.		333	165		
	AC9	4,44	46,438	05/1	984	Cha	ng et al.		328	127		
	AD9	4,45	56,990	06/1	984	Fish	er <i>et al.</i>		370	119		
	AE9	4,47	72,785	09/1	984	Kası	ıga		364	718		
	AF9	4,47	79,226	10/1	984	Prab	hu et al.		375	1		
	AG9	4,48	31,490	11/19	984	Hunt	ley		332	41		
	AH9	4,48	31,642	11/19	984	Hans	son		375	9		
	Al9	4,48	35,488	11/19	984	Hou	dart		455	327		
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	AJ9	wo	94/05087 A1		03/1994		PCT		нозм	1/00		N/A
	AK9	wo	96/02977 A1	•	02/1996		РСТ		Н04В	1/26		N/A
	AL9	wo	96/08078 A1		03/1996		PCT		H03D	3/00		N/A
	AM9	wo	96/39750 A1		12/1996		PCT		Н04В	1/26		N/A
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	AO	9	Faulkner, N.E Oscillators," / (March 1983)	EEE 1	Vilar, E., "Su Transactions	ubharr on Ins	nonic Sampling for the N strumentation and Measu	leasure <i>irement</i>	ment of	f Short Term S Vol. IM-32, N	Stabilit Io. 1, p	ty of Microwave op. 208-213
	АР	9		scillate	ors," <i>CPEM</i> 8		Sampling for the Accuratest: Conference on Pred					
	AQ	9	Faulkner, N.C Techniques," (1984).). and CPEN	Vilar, E., "Tii 1 84 Digest (me Do Confer	omain Analysis of Freque vence on Precision Electr	ency Sta romagne	ability U etic Me	sing Non-Zer asurements, I	o Dead EEE, (d-Time Counter pp. 81-82
	AR	9	Amplitude Sc	intillati	ons and Rai	n Atte	ation of the Channel Cap nuation," <i>IEEE Transacti</i> 55 (November 1990).	pacity of	f a Sate	ellite Link in th unications, IEI	e Pres EE Co	sence of mmunications
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	AA10	4,50	4,803	03/19	985	Lee	et al.	33:	2	31 R	ļ
	AB10	+	7,519	05/19		t	aiyama	32		126	
	AC10	1	7,520	05/19	-	Ogav		32		145	
	AD10		8,935	05/19			Roermund	33:		173	
	AE10	+	1,892	06/19			ce et al.	37		88	ļ
	AF10 AG10		3,773	07/19			n, Jr. <i>et al.</i>	45:		327	
	AH10		7,157 3,239	03/19		Reed		32		50 94	
	Al10		1,736	05/19		 	o et al.	30		267	
	17470	1 4,00	1,700	1.00/10			ENT DOCUMENTS	1 30		201	<u> </u>
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	AJ10	<u> </u>	97/38490 A1		10/1997		PCT	HO	3K	7/00	N/A
	AK10	wo	98/00953 A1		01/1998		PCT	H0	4L	27/26	N/A
	AL10	wo	98/24201 A1		06/1998	•	PCT	НО	4H	1/00	N/A
,	AM10	EP 0	099 265 A1		01/1984		EP	НО	3D	3/04	N/A
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	AN	<u>10</u>	Fukahori, K., IEEE, Vol. SC	"A CM C-19, N	IOS Narrow- No. 6, pp. 92	Band 6-932	Signaling Filter with Q Red (December 1984).	duction," /	EEE Jou	mal of Solid-	-State Circuits,
	AO	<u>10</u>	Fukuchi, H. a Microwaves,	nd Ots Anteni	su, Y., "Avail nas and Prop	able ti pagatio	me statistics of rain attenu on, IEE, Vol. 135, Pt. H, N	uation on e lo. 6, pp. 3	earth-spa 87-390 (ice path," <i>IEE</i> December 19	E <i>Proceedings-H:</i> 988).
	AP	<u>10</u>	Gibbins, C.J. Vol. 134, Pt. I				etre-wave propagation thro oril 1987).	ough hydro	ocarbon	flame," <i>IEE F</i>	Proceedings, IEE,
	AQ	<u>10</u>					rformance of frequency sy nd 110 (January 1984).	nthesizers	s," <i>Micr</i> o	waves & RF,	Hayden
	AR	<u>10</u>					ological effects on propag n, Vol. 16, No. 5, pp. 589-6				
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	AA11	4,60	2,220	07/19	986	Kur	ihara		33		19	
	AB11	4,60	03,300	07/19	986	Wel	lles, II et al.		329)	50	
	AC11	4,61	2,464	09/19	986	Ishi	kawa <i>et al.</i>		30	,	496	
	AD11	4,61	12,518	09/19	986	Gar	ns et al.		33	?	21	
	AE11		16,191	10/19		1	ani <i>et al.</i>	_	33		4	
	AF11	_	21,217	11/19		Sax	e et al.		31		1	
	AG11	1	28,517	12/19			warz et al.		37		40	
	AH11	1	34,998	01/19			wford		33		1 A	
	Al11	4,64	18,021	03/19			erkrack		363	3	157	
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	AJ11	EP (0 560 228 A1		09/1993		EP		но	3D	7/12	N/A
	AK11		2 245 130		04/1975		FR		H0	3K	5/13	Yes (See AP50)
	AL11	DE 3	35 41 031 A1		05/1986		DE		HO	3D	3/00	Yes (See AR50)
	AM11	EPO	732 803 A1		09/1996		EP		НО	3D	3/00	Yes (See AN51)
			OTHE	R (Inc	cluding Aut	hor, 1	litle, Date, Pertinent Pa	iges, e	tc.)			
	AN	<u>11</u>	Gregorian, R. 941-966 (Aug	. <i>et al</i> ., just 19	, "Switched-0 83).	Capad	citor Circuit Design," <i>Pro</i>	ceedin	gs of i	he IEEE	F, IEEE, Vol.	71, No. 8, pp.
	AO	<u>11</u>	Groshong et a 67-68, 70, 73				hniques Simplify Digital 91).	Radio,"	Elec	ronic De	esign, Pento	n Publishing, pp.
	АР	<u>11</u>					opes and Other RF Syst EEE, pp. 629-635 (Dece			ough X-E	Band," <i>IEEE</i>	Transactions on
	AQ	<u>11</u>	Haddon, J. et Propagation,				licrowave Scintillations o).	on a Sat	ellite	Down-Li	ink at X-Band	d," Antennas and
	AR	<u>11</u>	Haddon, J. ar Paths and the 34, No. 5, pp.	Influe	ence of Antei	nna A	Induced Microwave Scin perture," <i>IEEE Transact</i>	tillation	s fron Ante	n Clear A	Air and Rain d <i>Propagatio</i>	on Earth Space on, IEEE, Vol. AP-
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Page 12 of 56 APPLICATION NO. ATTY, DOCKET NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP March 14, 2000 2631 **U.S. PATENT DOCUMENTS DOCUMENT** DATE NAME **CLASS** SUB-FILING DATE NUMBER **CLASS** AA12 4,651,034 03/1987 Sato 307 556

EXAMINER INITIAL AB12 4,675,882 06/1987 Lillie et al. 80 375 7 AC12 4,688,253 08/1987 Gumm 381 AD12 4,716,376 12/1987 Daudelin 329 107 AE12 4,716,388 12/1987 Jacobs 333 173 AF12 4,718,113 01/1988 Rother et al. 455 209 AG12 4,726,041 02/1988 Prohaska et al. 375 91 AH12 4,733,403 03/1988 Simone 375 103 Al12 03/1988 4,734,591 Ichitsubo 307 219.1 **FOREIGN PATENT DOCUMENTS EXAMINER**

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Hewitt, A. et al., "An Autoregressive Approach to the Identification of Multipath Ray Parameters from Field Measurements," IEEE Transactions on Communications, IEEE Communications Society, Vol. 37, No. 11, pp. 1136-1143 (November 1989).

Hewitt, A. and Vilar, E., "Selective fading on LOS Microwave Links: Classical and Spread-Spectrum Measurement Techniques," *IEEE Transactions on Communications*, IEEE Communications Society, Vol. 36, No. 7, pp. 789-796 (July 1988).

Hewitt, A. et al., "An 18 Ghz Wideband LOS Multipath Experiment," International Conference on Measurements

for Telecommunication Transmission Systems - MTTS 85, IEE, pp. 112-116 (November 27-28, 1985)

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FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT

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	AA13	4,73	7,969	04/19	988	Stee	l et al.	379	5	67	
	AB13	4,74	3,858	05/19	988	Ever	ard	330)	10	
	AC13	4,74	5,463	05/19	988	Lu		358	8	23	
	AD13	4,75	1,468	06/19	988	Agos	ston	328	3	133	
	AE13	4,75	7,538	07/19	988	Zink		38	1	7	
	AF13	4,76	8,187	08/19	988	Mars	hall	370	0	69.1	
	AG13	4,76	9,612	09/19	988	Tama	akoshi <i>et al</i> .	328	8	167	
	AH13	4,78	5,463	11/19	988	Janc	et al.	375	5	<u>1</u>	
	Al13	4,79	1,584	12/19	988	Greiv	venkamp, Jr.	364	4	525	
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	AJ13	EP (817 369 A2&A	\ 3	01/1998		EP	но	3D	7/00	N/A
	AK13	wo	91/18445 A1		11/1991		РСТ	но	3D	7/18	N/A
	AL13	wo	99/23755 A1		05/1999		PCT	но	3D	7/16	N/A
	AM13	JP 5	6-114451		09/1981		JP	но	4B	7/02	No
<u> </u>		•	OTHE	R (Inc	cluding Aut	hor. T	itle, Date, Pertinent F	Pages, etc.)			
	AN	<u>13</u>	Hospitalier, E Vol. VII, pp. 2			Recor	ding and Observing R	apidly Varying	Pheno	mena," Sciei	nce Abstracts, IEE,
	AO	<u>13</u>	Howard, I.M. Detection," <i>Ti</i> Australia, pp.	he Insi	titution of En	gineer	emodulating High Fred is <i>Australia Vibration a</i> -20, 1990).	quency Reson and Noise Con	ance S ference	ignals for Be	aring Fault of Engineers,
	AP	13	Hu, X., <i>A Swi</i> Science, Dep 64 (1995).	tched- t. of E	Current San lectrical and	<i>nple-ar</i> Comp	nd-Hold Amplifier for F uter Engineering, Univ	M Demodulativersity of Toro	ion, The nto, UN	esis for Maste II Dissertatio	er of Applied n Services, pp. 1-
	AQ	<u>13</u>	Hung, H-L. A. Sampling Sys	et al. tem,"	, "Characteri IEEE MTT-S	ization S <i>Dige</i> :	of Microwave Integrat st, IEEE, pp. 507-510	ed Circuits Us (1991).	sing An	Optical Phas	ee-Locking and
	AR	<u>13</u>	Hurst, P.J., "S Transactions 1991).	Shifting on Cir	g the Freque cuits and Sy	ncy Re	esponse of Switched-(, IEEE Circuits and Sy	Capacitor Filte estems Society	rs by N y, Vol. (onuniform Sa 38, No. 1, pp.	ampling," <i>IEEE</i> 12-19 (January
	لــــــــــــــــــــــــــــــــــــــ		L								

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INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO. APPLICATION NO. 09/525,615

APPLICANT Sorrells et al.

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	AA14	4,80	01,823	01/1	989	Yoko	yama		307	353	
	AB14	4,80	06,790	02/1	989	†	Sone		307	353	
	AC14	4,81	10,904	03/1	989	Crav	ford		307	353	
	AD14	4,81	10,976	03/1	989	Cow	ey et al.		331	117 R	
	AE14	4,81	11,362	03/1	989		er, Jr. et al.		375	75	
	AF14	4,81	9,252	04/1	989	Chris	stopher		375	122	
	AG14	4,83	33,445	05/1	989	Buch	ele		341	118	
	AH14	4,86	52,121	08/1	989	Hoch	schild et al.		333	173	
	Al14	4,86	8,654	09/1	989	Juri e	et al.		358	133	
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EXAMINER INITIAL		DOG	CUMENT NUM	BER	DATE		COUNTRY		CLASS	SUB- CLASS	TRANSLATION
	AJ14	AJ14 JP 8-32556			02/1996		JP		H04L	1/04	No
	AK14	JP 8	3-139524		05/1996		JP		H03D	7/00 27/00	No No
	AL14	JP 5	9-144249	08/1984		JP		H04L			
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	AN	<u>14</u>	Janssen, J.M	ings C	ircuits, Devid	ntal 'St	alse width on the frequency of Systems, IEE, Vol. of Systems, IEE, Vol. of Systems, IEE, Vol. of Systems, Philips Research	141, No.	4, pp. 328-33	36 (August 19	994). D Mc/s: I.
_	AP	14	Janssen, J.M Mc/s: II. Elec (September 1	trical E	d Michels, A. Build-Up," <i>Ph</i>	.J., "Aı nilips T	n Experimental 'Strobe echnical Review, Phil	oscopic' ips Rese	Oscilloscope earch Laboraí	for Frequence fories, Vol. 12	cies up to about 50 2, No. 3, pp. 73-82
	AQ	14	Jondral, V.F. June 1996).	et al.,	"Doppler Pro	ofiles f	or Communication Sa	itellites,"	Frequenz, H	erausberger,	pp. 111-116 (May-
	AR	<u>14</u>					pread Spectrum Syste EEE Communications				ence of In-band
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Page 15 of 56 ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT DATE NAME **CLASS** SUB-FILING DATE NUMBER **CLASS AA15** 4,870,659 09/1989 Oishi et al. 82 375 **AB15** 4,871,987 10/1989 Kawase 332 100 AC15 4,885,587 12/1989 Wiegand et al. 42 14 AD15 4,885,756 12/1989 Fontanes et al. 375 82 AE15 4,888,557 12/1989 Puckette, IV et al. 329 341 AF15 4,890,302 12/1989 Muilwijk 375 80 AG15 4,893,316 01/1990 Janc et al. 375 44 AH15 4,893,341 01/1990 7 Gehring 381 Al15 De Agro 4.894.766 01/1990 363 159 FOREIGN PATENT DOCUMENTS **EXAMINER** INITIAL **DOCUMENT NUMBER** DATE COUNTRY **CLASS** SUB-TRANSLATION **CLASS** AJ15 JP 6-237276 08/1994 JP H04L 27/20 No AK15 JP 8-23359 01/1996 JP H04L 27/20 No AL15 JP 47-2314 02/1972 JP No AM15 JP 58-7903 01/1983 IP H03C 1/02 No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Karasawa, Y. et al., "A New Prediction Method for Tropospheric Scintillation on Earth-Space Paths," IEEE ΑN <u>15</u> Transactions on Antennas and Propagation, IEEE Antennas and Propagation Society, Vol. 36, No. 11, pp. 1608-1614 (November 1988).

Kirsten, J. and Fleming, J., "Undersampling reduces data-acquisition costs for select applications," EDN, AO <u>15</u> Cahners Publishing, Vol. 35, No. 13, pp. 217-222, 224, 226-228 (June 21, 1990). Lam, W.K. et al., "Measurement of the Phase Noise Characteristics of an Unlocked Communications Channel ΑP <u>15</u> Identifier," Proceedings Of the 1993 IEEE International Frequency Control Symposium, IEEE, pp. 283-288 (June 2-4, 1993). Lam, W.K. et al., "Wideband sounding of 11.6 Ghz transhorizon channel," Electronics Letters, IEE, Vol. 30, No. AQ <u>15</u> 9, pp. 738-739 (April 28, 1994). Larkin, K.G., "Efficient demodulator for bandpass sampled AM signals," Electronics Letters, IEE, Vol. 32, No. 2, AR <u>15</u> pp. 101-102 (January 18, 1996).

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Science, IEEE Nuclear and Plasma Sciences Society, Vol. NS-26, No. 4, pp. 4443-4449 (August 1979).

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FORM PTO-1449

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APPLICANT Sorrells et al.

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	AA17	4,9	55,079	09/1	990	Con	nerney <i>et al.</i>	455	325	
	AB17	4,9	65,467	10/1	990	Bilte	rijst	307	352	
	AC17	4,9	67,160	10/19	990	Quie	vy et al.	328	16	
	AD17	4,9	70,703	11/19	990	Haril	naran <i>et al</i> .	367	138	
	AE17	4,9	82,353	01/19	991	Jaco	b et al.	364	724.10	
	AF17	4,9	84,077	01/19	991	Uchi	da	358	140	
	AG17	4,9	95,055	02/19	991	Weir	berger <i>et al</i> .	375	5	
	AH17	5,0	03,621	03/19	991	Gailu	ıs	455	209	
	Al17	5,0	05,169	04/19	991	Bron	der et al.	370	76	
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EXAMINER INITIAL		DO	CUMENT NUM	BER	DATE		COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AJ17	JP	5-175730		07/1993		JP	H03D	1/00	No
	AK17	7 JP 5-175734		07/1993			JP	H03D	3/00	No
	AL17	JP	7-154344		06/1995		JP	H04B	14/06	No
····	AM17	JP	7-307620	-	11/1995		JP	H03D	1/18	No
			OTHE	R (Inc	ludina Autl	hor. T	itle, Date, Pertinent Pa	ages, etc.)		<u> </u>
	AN	<u>17</u>	Liou, M.L., "A IEEE, Vol. 71				ded Analysis of Switch ugust 1983).	ed-Capacitor Circuit	s," <i>Proceedii</i>	ngs of the IEEE,
	AO	<u>17</u>	Lo, P. et al., " (March 26, 19		ent Automat	ic Gai	n Control," <i>IEE Colloqu</i>	ium on Phase Locke	ed Technique	s, IEE, pp. 2/1-2/6
	АР	<u>17</u>					uced Scintillations on S annas and Propagation			
	AQ	<u>17</u>	Lo, P.S.L.O. e	<i>et al.</i> , " √ol. 20	Observation , No. 7, pp.	s of A 307-30	mplitude Scintillations o 8 (March 29, 1984).	on a Low-Elevation (Earth-Space	Path," <i>Electronics</i>
	AR	<u>17</u>					ihz Microwave Sampler and Techniques Society			
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ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP March 14, 2000 2631 U.S. PATENT DOCUMENTS **EXAMINER** INITIAL DOCUMENT DATE NAME CLASS SUB-FILING DATE NUMBER CLASS **AA18** 5,006,810 04/1991 Popescu 328 167 AB18 5,010,585 04/1991 Garcia 455 118 AC18 5,014,304 05/1991 Nicollini et al. 379 399 AD18 5,015,963 05/1991 Sutton 329 361 AE18 5,017,924 05/1991 Guiberteau et al. 342 195 AF18 5,020,149 05/1991 Hemmie 455 325 AG18 5,020,154 05/1991 Zierhut 455 608 Collier et al. AH18 5,052,050 09/1991 455 296 AI18 5,065,409 11/1991 Hughes et al. 375 91 **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY **CLASS** SUB-TRANSLATION **CLASS** AJ18 JP 55-66057 05/1980 G06K 7/10 No AK18 JP 63-65587 03/1988 JP. G06K 7/10 No AL18 JP 63-153691 06/1988 JP G06K 17/00 No AM18 Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Marsland, R.A. et al., "130 Ghz GaAs monolithic integrated circuit sampling head," Appl. Phys. Lett., American ΑN <u>18</u> Institute of Physics, Vol. 55, No. 6, pp. 592-594 (August 7, 1989). Martin, K. and Sedra, A.S., "Switched-Capacitor Building Blocks for Adaptive Systems," IEEE Transactions on AO 18 Circuits and Systems, IEEE Circuits and Systems Society, Vol. CAS-28, No. 6, pp. 576-584 (June 1981). Marzano, F.S. and d'Auria, G., "Model-based Prediction of Amplitude Scintillation variance due to Clear-Air AP 18 Tropospheric Turbulence on Earth-Satellite Microwave Links," IEEE Transactions on Antennas and Propagation, IEEE Antennas and Propagation Society, Vol. 46, No. 10, pp. 1506-1518 (October 1998). Matricciani, E., "Prediction of fade durations due to rain in satellite communication systems," Radio Science, AQ 18 American Geophysical Union, Vol. 32, No. 3, pp. 935-941 (May-June 1997). McQueen, J.G., "The Monitoring of High-Speed Waveforms," Electronic Engineering, Morgan Brothers Limited, AR <u>18</u> Vol. XXIV, No. 296, pp. 436-441 (October 1952). **EXAMINER** DATE CONSIDERED

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ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT DATE NAME SUB-CLASS **FILING DATE** NUMBER CLASS **AA20** 5,136,267 08/1992 Cabot 333 174 AB20 5,140,705 08/1992 Kosuga 455 318 AC20 5,150,124 09/1992 Moore et al. 342 68 AD20 5,151,661 09/1992 Caldwell et al. 14 328 AE20 5,159,710 10/1992 Cusdin 455 304 AF20 Silvian 5,170,414 12/1992 375 59 AG20 5,172,070 12/1992 304 Hiraiwa et al. 329 AH20 5,191,459 03/1993 Thompson et al. 359 133 AI20 5.204.642 04/1993 331 Ashgar et al. 135 **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY **CLASS** SUB-TRANSLATION **CLASS** AJ20 Yes No AK20 Yes No AL20 Yes Νo **AM20** Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Ndzi, D. et al., "Wideband Statistics of Signal Levels and Doppler Spread on an Over-The-Sea Transhorizon AN 20 Link," IEE Colloquium on Propagation Characteristics and Related System Techniques for Beyond Line-of-Sight Radio, IEE, pp. 9/1-9/6 (November 24, 1997). "New zero IF chipset from Philips," Electronic Engineering, United News & Media, Vol. 67, No. 825, p. 10 AO <u>20</u> (September 1995). Ohara, H. et al., "First monolithic PCM filter cuts cost of telecomm systems," Electronic Design, Hayden ΑP <u>20</u> Publishing Company, Vol. 27, No. 8, pp. 130-135 (April 12, 1979). AQ <u>20</u> Oppenheim, A.V. et al., Signals and Systems, Prentice-Hall, pp. 527-531 and 561-562 (1983). Ortgies, G., "Experimental Parameters Affecting Amplitude Scintillation Measurements on Satellite Links," AR <u> 20</u> Electronics Letters, IEE, Vol. 21, No. 17, pp. 771-772 (August 15, 1985). **EXAMINER** DATE CONSIDERED

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ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615

APPLICANT Sorrells et al.

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	AA21	5,21	2,827	05/1	993	Mes	ko <i>et al.</i>	455	219	
	AB21	5,21	4,787	05/1	993	Kark	ota, Jr.	455	3.2	
	AC21	+	0,583	06/1		Solo	mon	375	82	
	AD21	1	0,680	06/1		Lee	·	455	102	
	AE21	1	2,144	06/1		-	ehart	381	15	
	AF21	+	0,097	07/1		+	e et al.	455	226.1	
	AG21 AH21	+	9,686 1,561	08/1		Dow		455	78	
<u></u> .	AI21	1	9,203	09/1		Barn		375 375	97	
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			Peeters, G. a Measuremen 88 (March-Ap	ot al., "ts," Inionil 199	Evaluation of ternational July 27).	of Statis	i, No. 12, 7 pages (Dec	ember 1997). Air Scintillation Prections, John Wiley a	diction Using on Sons, Vol.	Olympus Satellit . 15, No. 2, pp. 7
	AO	21	Peeters, G. e Measuremen 88 (March-Ap Perrey, A.G. Dept. of Com	ot al., "All or il 195 and Somerce	Evaluation of temational John Stranger, pp. 1-14 (Market Stranger)	of Statis ournal	i, No. 12, 7 pages (Dec	ember 1997). Air Scintillation Prections, John Wiley a	diction Using on Sons, Vol.	Olympus Satellit . 15, No. 2, pp. 7 mpling Gate, U.S
	AO AP	<u>21</u> <u>21</u>	Peeters, G. e Measuremen 88 (March-Ap Perrey, A.G. Dept. of Com Poulton, K. e pp. 962-969 (and Somerce	Evaluation of ternational July 27). choenwetter, p. 1-14 (Mark 1-Ghz 6-bit mber 1987).	of Statis ournal , H.K., May 19	is, No. 12, 7 pages (Decisical Models for Clear-A of Satellite Communical NBS Technical Note 1:	ember 1997). Air Scintillation Prections, John Wiley a . 121: A Schottky Dio of Solid-State Circu	diction Using ond Sons, Vol.	Olympus Satellit 15, No. 2, pp. 7 mpling Gate, U.S

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	AA23	5,29	93,398	03/1	994	Ham	ao et al.	37	' 5	1	
	AB23	5,30	03,417	04/1	994	Law	\$	45	55 .	314	
	AC23	5,30	7,517	04/1	994	Rich		45	55	306	
	AD23	5,31	15,583	05/1	994	Muŋ	ohy <i>et al</i> .	37	'0	18	
	AE23	5,32	21,852	06/1	994	Seoi	ng	45	55	182.1	
	AF23	5,32	25,204	06/1	994	Scar	ра	34	18	607	
	AG23	5,33	37,014	08/1	994	Najle	e et al.	32	24	613	
	AH23	5,33	9,054	08/1	994	Tagu	ıchi	33	2	100	
	AI23	5,33	9,459	08/1	994	Schi	ltz et al.	45	5	333	
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	AJ23		.,								Yes No
	AK23										Yes No
	AL23										Yes No
	AM23					· ,					Yes
			OTHI	ER (In	cluding Auth	or T	I itle, Date, Pertinent Pa	ros eta l			No_
	AN	<u>23</u>	Press Releas Associates, 2	se, "Pa ? Page	rkervision, In s (June 17, 1	c. An 994).	nounces Appointments to	o its Nation	al Sale:	s Force," Lipp	ert/Heilshorn and
·	AO	<u>23</u>	Press Releas Lippert/Heilst	e, "Pa norn ar	rkervision, In nd Associates	c. Anı s, 3 P	nounces Second Quarter ages (August 9, 1994).	r and Six M	onths F	inancial Resu	ults,"
	АР	<u>23</u>	Press Releas Lippert/Heilsh	e, "Pa norn ar	rkervision, In	c. Anı s, 3 P	nounces Third Quarter a ages (October 28, 1994)	nd Nine Mo	onths Fi	nancial Resul	ts,"
	AQ	<u>23</u>	Press Releas Lippert/Heilsh	e, "Pa orn ar	rkervision, Ind nd Associates	c. Anı s, 2 Pa	nounces First Significant ages (November 7, 1994	Dealer Sa).	e of Its	Cameraman(9 System II,"
	AR	<u>23</u>	Press Releas Associates, 2				nounces Fourth Quarter	and Year E	nd Res	ults," Lippert/	Heilshorn and
EXAMINER	<u> </u>			18			· · · · · · · · · · · · · · · · · · ·	DAT	E CONS	SIDERED	

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EXAMINER INITIAL			CUMENT MBER	DATI	E	NAM	E	Cı	ASS	SUB- CLASS	FILING DATE
	AA24	5,35	5,114	10/19	994	Sutte	rlin <i>et al.</i>	34	0	310 A	
	AB24	5,36	1,408	11/19	994	Wata	ınabe <i>et al.</i>	45	5	324	
	AC24	5,36	9,800	11/19	994	Taka	gi et al.	45	5	59	
	AD24	5,37	5,146	12/19	994	Chal	mers	37	5	103	
	AE24	5,37	9,040	01/19	995	Mizo	moto <i>et al</i> .	34	1	143	
	AF24	5,37	9,141	01/19	995	Thon	npson <i>et al.</i>	35	9	125	
	AG24	5,38	8,063	02/19	995	Taka	tori <i>et al.</i>	36	4	724.17	
	AH24	5,39	0,364	02/19	95	Web	ster et al.	45	5	52.3	
	Al24	5,40	0,084	03/19	995	Scan	pa	34	8	624	
					FOREIGI	N PATI	ENT DOCUMENTS			· +	
EXAMINER INITIAL		DOG	CUMENT NUM	BER	DATE		COUNTRY	Cı	.ASS	SUB- CLASS	TRANSLATION
	AJ24		-				,				Ye N
	AK24										Ye N
	AL24								·		Ye
	AM24										Ye
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	AN	<u>24</u>	Associates, 2	2 Page	s (March 21	, 1995			<u>.</u> ·	· 	-
-	AO	<u>24</u>	Press Releas Associates, 3	se, "Pa 3 Page	rkervision, I s (April 28,	nc. An 1995).	nounces First Quarter Fi	nancial Re	sults," Li	ippert/Heilsh	orn and
	AP	<u>24</u>	Press Releas Manufacturin	se, "Pa g Head	irkervision V dquarters, 1	Vins To Page	op 100 Product Districts' (June 29, 1995).	Choice Aw	ard," Pa	rkervision M	arketing and
	AQ	<u>24</u>	Press Releas Manufacturin	se, "Pa g Hea	irkervision N dquarters, 1	lationa Page	I Sales Manager Next Pri (July 6, 1995).	esident of	USDLA,	" Parkervisio	n Marketing and
	AR	<u>24</u>	Press Releas Page (July 2	se, "Pa 1, 1995	irkervision G 5).	Granted	l New Patent," Parkervisi	on Marketi	ing and I	Manufacturir	ng Headquarters,
EXAMINER								DAT	E CONS	SIDERED	,
EXAMINER: In	itial if refe	rence sidere	considered, wh	nether	or not citation	on is in	conformance with MPEF	P 609. Dra	w line th	rough citation	on if not in
- Januarios ur				,	*******						

ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER** DOCUMENT INITIAL DATE NAME **CLASS** SUB-FILING DATE NUMBER CLASS AA25 5,404,127 04/1995 340 310.02 Lee et al. **AB25** 5,410,541 04/1995 Hotto 370 76 AC25 5,410,743 04/1995 Seely et al. 455 326 AD25 5,412,352 05/1995 Graham 332 103 AE25 5,416,803 05/1995 Janer 375 324 AF25 5,422,913 06/1995 Wilkinson 375 347 AG25 06/1995 5,423,082 Cygan et al. 455 126 AH25 06/1995 5,428,638 Cioffi et al. 375 224 A125 5,428,640 06/1995 375 Townley 257 **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS **TRANSLATION** SUB-**CLASS** AJ25 Yes No AK25 Yes No AL25 Yes No AM25 Yes ,No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision AN <u> 25</u> Marketing and Manufacturing Headquarters, 2 Pages (July 31, 1995). Press Release, "Parkervision, Inc. Expands Its Cameraman System II Product Line," Parkervision Marketing AO <u>25</u> and Manufacturing Headquarters, 2 Pages (September 22, 1995). Press Release, "Parkervision Announces New Camera Control Technology," Parkervision Marketing and AP <u>25</u> Manufacturing Headquarters, 2 Pages (October 25, 1995). Press Release, "Parkervision, Inc. Announces Completion of VTEL/Parkervision Joint Product Line," AQ <u>25</u> Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 30, 1995). Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Parkervision AR <u>25</u> Marketing and Manufacturing Headquarters, 2 Pages (October 30, 1995). **EXAMINER** DATE CONSIDERED **EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615

APPLICANT Sorrells et al.

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EXAMINER INITIAL		DOCUMENT NUMBER	DAT	E	NAM	E		CLASS	SUB- CLASS	FILING DATE
	AA26	5,434,546	07/1	995	Palm	er		332	151	
	AB26	5,438,692	08/1	995	Mohi	ndra		455	324	
	AC26	5,444,415	08/1	995	Dent	et al.		329	302	
	AD26	5,444,416	08/1	995	Ishik	awa <i>et al</i> .		329	341	
	AE26	5,444,865	08/1	995	Heck	et al.		455	86	
	AF26	5,446,421	08/1	995	Kech	kaylo		332	100	
	AG26	5,446,422	08/1	995	Matti	la et al.		332	103	
	AH26	5,448,602	09/1	995	Ohm	ori et al.		375	347	
	AI26	5,451,899	09/1	995	Lawt	on		329	302	
				FOREIGN	N PAT	ENT DOCUMENTS				
EXAMINER NITIAL		DOCUMENT NU	MBER	DATE		COUNTRY		CLASS	SUB- CLASS	TRANSLATIO
	AJ26			·						Ye N
	AK26									Ye N
	AL26					:				Ye N
	AM26									Ye
		ОТ	HER (In	cludina Aut	hor. T	tle, Date, Pertinent Pa	aes, etc	:.)		
	AN					raman Personal Locator uring Headquarters, 2 Pa				XV Award,"
	AO					nounces Purchase Come arters, 1 Page (February			L Corporation	n," Parkervision
	АР	26 Press Releand Manuf	ase, "Pa acturing	ırkerVision, I Headquarter	nc. Anrs, 2 Pa	nounces Fourth Quarter ages (February 27, 1996	and Ye	ar End Res	sults," Parker	vision Marketing
	AQ			irkerVision, I iges (March		pands its Product Line," 3).	Parken	vision Mark	eting and Ma	nufacturing
	AR	26 Press Rele	ase, "Pa	ırkerVision F Headquarter	iles Pars, 1 Pa	atents for its Research of age (March 28, 1996).	f Wirele	ss Technol	ogy," Parken	rision Marketing
EXAMINER	<u> </u>				· ··	· · · · · · · · · · · · · · · · · · ·		ATE CONS	SIDERED	

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EXAMINER INITIAL		DOC NUM	UMENT IBER	DAT	E	NAM	E	CLAS	S SUB- CLASS	FILING DATE
	AA27	5,454	4,007	09/19	995	Dutta	· · · · · · · · · · · · · · · · · · ·	. 375	322	
	AB27	5,454	4,009	09/19	995	Fruit	et al.	372	202	
	AC27	5,463	3,356	10/19	995	Palm	er	332	117	
	AD27	5,463	3,357	10/19	995	Hobo	en	332	151	
	AE27	5,465	5,071	11/19	995	Koba	yashi <i>et al.</i>	329	315	
	AF27	5,465	5,410	11/19	995	Hibe	n et al.	455	266	
	AG27	5,465	5,415	11/19	995	Bien		455	326	
	AH27	5,47	1,162	11/19	995	McE	van	327	92	
	AI27	5,479	9,120	12/19	995	McE	van	327	91	
		_			FOREIGI	N PAT	NT DOCUMENTS	,		
EXAMINER NITIAL		DOC	UMENT NUM	BER	DATE		COUNTRY	CLAS	S SUB- CLASS	TRANSLATIO
	AJ27									Y
	AK27	<u> </u>								Ye
	AL27	ļ	 							Ye
	AM27									Y(
	AN	.77	Licos Meicas	se, ra	irkervision, ii		lounces First Significan	t Sale of Its Ca	meraman® Thro	ee-Chip System,"
	AO	<u>27</u> <u>27</u>	Parkervision Press Releas	Marke	ting and Ma	nufactu	oduces New Product Liarters, 2 Pages (April 15	ages (April 12,	1996).	ee-Chip System," et," Parkervision
			Press Release Marketing and	Marke	irkervision, li ufacturing H	nufactunc. Intribed	oduces New Product Lin	ne For Studio F	1996). Production Mark	et," Parkervision
	AP	<u>27</u>	Press Releas Marketing an Press Releas and Manufac	Marke se, "Pa d Man se, "Pa turing	irkervision, li ufacturing H	nc. Intrieadqui	oduces New Product Liarters, 2 Pages (April 15	ne For Studio F 5, 1996).	Production Mark	et," Parkervision rvision Marketing
	AP	<u>27</u> <u>27</u>	Press Releas Marketing and Press Releas and Manufacturing	Marke se, "Pa d Man se, "Pa sturing se, "Pa g Head	irkervision, liufacturing H	nc. Intribed nc. Anirs, 1 Pa	oduces New Product Liarters, 2 Pages (April 15 nounces Private Placemage (April 15, 1996).	ne For Studio F 5, 1996).	Production Mark Shares," Parke	et," Parkervision rvision Marketing Marketing and

ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT DATE **CLASS** FILING DATE NAME SUB-NUMBER **CLASS** AA28 5,479,447 12/1995 Chow et al. 375 260 Kennedy et al. AB28 5,483,193 01/1996 329 300 AC28 5,483,549 01/1996 Weinberg et al. 375 200 AD28 5,483,691 01/1996 Heck et al. 455 234.2 AE28 5,490,173 02/1996 Whikehart et al. 375 316 AF28 5,493,581 02/1996 Young et al. 375 350 Reis AG28 5,493,721 02/1996 455 339 AH28 5,495,200 02/1996 Kwan et al. 327 554 AI28 5,495,202 02/1996 Hsu 327 113 **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS **TRANSLATION** SUB-**CLASS** AJ28 Yes No AK28 Yes No AL28 Yes No **AM28** Yes OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision AN 28 Marketing and Manufacturing Headquarters, 3 Pages (August 1, 1996). Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Parkervision AO <u>28</u> Marketing and Manufacturing Headquarters, 2 Pages (October 29, 1996). Press Release, "PictureTel and ParkerVision Sign Reseller Agreement," Parkervision Marketing and AP <u>28</u> Manufacturing Headquarters, 2 Pages (October 30, 1996). Press Release, "CLI and ParkerVision Bring Enhanced Ease-of-Use to Videoconferencing," CLI/Parkervision, 2 AQ <u>28</u> Pages (January 20, 1997). Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Results," Parkervision Marketing AR 28 and Manufacturing Headquarters, 3 Pages (February 27, 1997). **EXAMINER** DATE CONSIDERED **EXAMINER**: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO. 1744.0450003 APPLICATION NO. 09/525,615 APPLICANT Sorrells et al.

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EXAMINER INITIAL			CUMENT MBER	DAT		NAM		C	LASS	SUB- CLASS	FILING DATE
	AA29	5,49	5,500	02/19	996	Jova	novich et al.	3	75	206	
	AB29	5,49	9,267	03/19	996	Ohe	et al.	3	75	206	
	AC29	5,50	0,758	03/19	996	Thor	mpson et al.	3	59	189	
	AD29	5,51	7,688	05/19	996	Faje	n <i>et al</i> .	4	55	333	
	AE29	5,51	9,890	05/19	996	Pinc	kley	4	55	307	
	AF29	5,52	3,719	06/19	996	Long	jo et al.	3	27	557	
	AG29	5,52	3,726	06/19	996	Kroe	ger et al.	3	32	103	
	AH29	5,52	3,760	06/19	996	McE	wan	3	42	89	
	Al29	5,53	9,770	07/19	996	Ishig	aki	3	75	206	
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EXAMINER INITIAL		DOC	CUMENT NUM	BER	DATE		COUNTRY	c	LASS	SUB- CLASS	TRANSLATION
	AJ29										Yes No
	AK29										Yes No
	AL29										Yes No
	AM29										Yes No
			ОТНЕ	R (Inc	cluding Autl	hor, T	itle, Date, Pertinent Pa	ges, etc.)			
	AN	<u>29</u>	Press Releas Manufacturin	e, "Pa g Head	rkervision, Ir dquarters, 3	nc. An Pages	nounces First Quarter F s (April 29, 1997).	inancial Re	esults," F	Parkervision N	Marketing and
	AO	<u>29</u>	Press Releas 1997).	e, "NE	C and Parke	ervisio	n Make Distance Learni	ng Closer,	" NEC A	merica, 2 Paç	ges (June 18,
	АР	<u>29</u>	Press Releas Parkervision	e, "Pa Marke	rkervision So ting and Mar	upplie nufact	s JPL with Robotic Cam uring Headquarters, 2 pa	eras, Cam ages (July	eraman 8, 1997)	Shot Director	for Mars Mission,"
	AQ	<u>29</u>	Press Releas Marketing and	e, "Pa d Man	rkerVision a ufacturing He	nd IBN eadqu	A Join Forces to Create arters, 2 Pages (July 23	Wireless (, 1997).	Compute	r Peripherals,	" Parkervision
	AR	<u>29</u>	Press Releas Marketing and	e, "Pa d Man	rkerVision, li ufacturing He	nc. Ar eadqu	nounces Second Quarte arters, 3 Pages (July 31	er and Six , 1997).	Months	Financial Res	ults," Parkervision
EXAMINER	_ <u>L · _</u> L		<u> </u>					DA	re con	SIDERED	
			•								<u> </u>

ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP 2631 March 14, 2000 **U.S. PATENT DOCUMENTS EXAMINER** DOCUMENT INITIAL DATE NAME **CLASS** SUB-FILING DATE NUMBER CLASS 09/1996 **AA30** 5,555,453 Kajimoto et al. 455 266 **AB30** 5,557,641 09/1996 Weinberg 375 295 AC30 5,557,642 09/1996 Williams 375 316 AD30 5,579,341 11/1996 Smith et al. 375 267 AE30 5,579,347 11/1996 Lindquist et al. 375 346 AF30 5,584,068 12/1996 Mohindra 455 324 AG30 5,592,131 01/1997 Labreche et al. 332 103 AH30 5,602,847 02/1997 370 Pagano et al. 484 AI30 5,602,868 02/1997 Wilson 375 219 FOREIGN PATENT DOCUMENTS **EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-**TRANSLATION** CLASS AJ30 Yes No AK30 Yes No AL30 Yes No Yes **AM30** No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces Private Placement of 990,000 Shares," Parkervision Marketing AN <u>30</u> and Manufacturing Headquarters, 2 Pages (September 8, 1997). Press Release, "Wal-Mart Chooses Parkervision for Broadcast Production," Parkervision Marketing and AO <u>30</u> Manufacturing Headquarters, 2 Pages (October 24, 1997). Press Release, "Parkervision, Inc. Announces Third Quarter Financial Results," Parkervision Marketing and ΑP <u>30</u> Manufacturing Headquarters, 3 Pages (October 30, 1997). Press Release, "ParkerVision Announces Breakthrough in Wireless Radio Frequency Technology," Parkervision AQ <u>30</u> Marketing and Manufacturing Headquarters, 3 Pages (December 10, 1997). Press Release, "Parkervision, Inc. Announces the Appointment of Joseph F. Skovron to the Position of Vice President, Licensing - Wireless Technologies," Parkervision Marketing and Manufacturing Headquarters, 2 AR 30 Pages (January 9, 1998). **EXAMINER** DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

conformance and not considered. Include copy of this form with next communication to Applicant.

ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615

APPLICANT Sorrells et al.

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EXAMINER INITIAL			CUMENT MBER	DAT	E	NAM	E	CLA	\ss	SUB- CLASS	FILING DATE
	AA31	5,60	4,732	02/1	997	Kim	et al.	370		342	
	AB31	5,60	8,531	03/1	997	Hono	la et al.	386		1	
	AC31	5,61	0,946	03/1	997	Tana	ka et al.	375		269	
	AD31	+	35,494	04/1	997	Nicol	lini	327		554	<u> </u>
	AE31	5,61	7,451	04/1	997	Mimu	ura et al.	375		340	
-:·	AF31	5,61	9,538	04/1	997	Sem	pel et al.	375		328	
	AG31	+	1,455	04/1		1	ers et al.	348		6	
	AH31	+	0,227	05/19		+	et al.	455		324	
	Al31	5,64	0,415	06/1		Pand		375		202	
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	AJ31										Ye
	AK31	<u> </u>									Ye
		 					, , ,				Ye
	AM31										Ye
	AN	<u>31</u>	Strategic Fo	cus Ani	nounced in (nnound Decemi	ces Existing Agreement ber," Parkervision Marke	with IBM Ten eting and Mai	minates nufactu	s Company ring Headqu	y Continues with larters, 2 Pages
			(January 27,	1990).							
	AO	<u>31</u>	(January 27,	se, "La	boratory Tes		fy Parkervision Wireless (March 3, 1998).	s Technology	," Park	ervision Mai	keting and
			Press Relea Manufacturin	se, "La ng Head se, "Pa	boratory Tes dquarters, 2	Pages		and Year En	-,	***************************************	
-	АР	<u>31</u>	Press Relea Manufacturing Press Relea Marketing ar	se, "Lal ng Head se, "Pa nd Man	boratory Tes dquarters, 2 rkervision, lu ufacturing H	nc. Anneadqua	(March 3, 1998).	and Year En	d Finan	icial Results	," Parkervision
	AP	<u>31</u>	Press Relea Manufacturin Press Relea Marketing ar Press Relea Manufacturin Press Relea Manufacturin	se, "Lai se, "Pa d Man se, "Pa g Head	boratory Test dquarters, 2 rkervision, lufacturing H rkervision A dquarters, 2	nc. Anneadqua	(March 3, 1998). nounces Fourth Quarter arters, 3 Pages (March 5	and Year End 5, 1998). or NAB 98," F	d Finan	ricial Results	," Parkervision ting and

ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615

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EXAMINER INITIAL			CUMENT MBER	DAT		NAM			CLASS	SUB- CLASS	FILING DATE
	AA32	5,64	0,424	06/19	997	Bana	vong <i>et al</i> .		375	316	
	AB32	5,64	0,428	06/19	997	Abe	et al.		375	334	
	AC32	5,64	0,698	06/19	997	Sher	et al.		455	323	
	AD32	5,64	8,985	07/19	997	Bjere	de et al.		375	219	
	AE32	5,65	0,785	07/19	997	Roda	1		342	357	
	AF32	5,66	1,424	08/19	997	Tang			327	105	
	AG32	5,66	3,878	09/19	997	Walk	er		363	159	
	AH32	5,66	3,986	09/19	997	Striff	er		375	260	
	Al32	5,66	8,836	09/19	997	Smit	n et al.		375	316	-
					FOREIGI	N PAT	ENT DOCUMENTS				
EXAMINER NITIAL		DOC	CUMENT NUM	BER	DATE		COUNTRY		CLASS	SUB- CLASS	TRANSLATION
	AJ32										Ye N
	AK32			_							Ye N
	AL32									•	Ye N
	AM32										Ye N
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	AN	<u>32</u>					「2DATA' Introduced in I arters, 3 Pages (July 9,		se to Market	t Demand," P	arkervision
·	AO	<u>32</u>	Press Releas Headquarter				s Senior Management T).	「eam," f	Parkervision	Marketing ar	nd Manufacturing
	AP	<u>32</u>					ces Second Quarter and arters, 4 Pages (July 30			al Results," F	Parkervision
	AQ	32	Press Releas Marketing an	se, "Pa d Man	rkervision A ufacturing H	nnound	ces Third Quarter and Narters, 3 Pages (Octobe	Nine Mo er 30, 19	nth Financia 998).	il Results," P	arkervision
	AR	<u>32</u>	Press Releas Marketing an	se, "Qu d Man	estar Infocoufacturing H	omm, Ir leadqu	nc. Invests \$5 Million in arters, 3 Pages (Decem	Parken	vision Comm 1998).	non Stock," P	arkervision
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INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615

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EXAMINER INITIAL			CUMENT MBER	DAT	E	NAM	lE	CLASS	SUB- CLASS	FILING DATE
	AA33	5,68	0,078	10/1	997	Ariie		332	178	
	AB33	5,68	0,418	10/1	997	Crof	et al.	375	346	
	AC33	5,68	9,413	11/1	997	Jara	millo <i>et al</i> .	363	146	
	AD33		9,006	12/1	997	Zele	et al.	327	341	
	AE33	+	5,955	01/1	998	Free	burg et al.	331	14	
	AF33	_	0,998	01/1		Opas		455	324	
	AG33		4,910	02/1		Skoc	zen et al.	331	3	.
	AH33	1 -	5,281	02/1		Bly 6		375	344	<u> </u>
	AI33	5,72	1,514	02/1		•	kett <i>et al.</i>	331	3	
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EXAMINER INITIAL		DOC	CUMENT NUI	MBER	DATE		COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AJ33									Ye N
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	AL33						-			Ye N
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	AN	33	Press Relea Headquarte	ise, "Pa rs, 2 Pa	rkervision A ges (March	dds Tv 5, 199	vo New Directors," Parke 9).	ervision Marketing	and Manufac	turing
	AO	<u>33</u>	Press Relea Marketing a	ise, "Pa nd Man	rkervision A ufacturing H	nnound	ces Fourth Quarter and Sarters, 3 Pages (March 5	Year End Financial 5, 1999).	Results," Pa	rkervision
	AP	<u>33</u>	Press Relea Marketing a	se, "Joi nd Man	nt Marketing ufacturing H	g Agree leadqua	ement Offers New Auton arters, 2 Pages (April 13	nated Production S , 1999).	olution," Park	kervision
	AQ	<u>33</u>	"Project CO: Vol. LIV, No	ST 205: . 3, pp.	Scintillation 209-211 (Ma	ns in Ea ay-Jund	urth-satellite links," <i>Alta i</i> e, 1985).	Frequenza: Scientii	īc Review in	Electronics, AEI,
	AR	<u>33</u>	Razavi, B., F	RF Micr	oelectronics	; Prent	ice-Hall, pp. 147-149 (1	998).	· · · · · · · · · · · · · · · · · · ·	
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ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER** DOCUMENT INITIAL DATE NAME CLASS SUB-FILING DATE NUMBER CLASS 5,724,002 AA34 03/1998 Hulick 329 361 AB34 5,724,653 Baker et al. 455 296 03/1998 AC34 Chen 5,729,577 03/1998 375 334 AD34 5,729,829 03/1998 Talwar et al. 455 63 AE34 Cox et al. 5,732,333 03/1998 455 126 AF34 5,736,895 04/1998 Yu et al. 327 554 AG34 5,737,035 04/1998 Rotzoll 348 725 04/1998 327 AH34 5,742,189 Yoshida et al. 113 05/1998 347 AI34 5,748,683 Smith et al. 375 FOREIGN PATENT DOCUMENTS **EXAMINER** DOCUMENT NUMBER **CLASS** INITIAL DATE COUNTRY SUB-TRANSLATION CLASS AJ34 Yes No **AK34** Yes No AL34 Yes No **AM34** Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Reeves, R.J.D., "The Recording and Collocation of Waveforms (Part 1)," Electronic Engineering, Morgan AN <u>34</u> Brothers Limited, Vol. 31, No. 373, pp. 130-137 (March 1959). Reeves, R.J.D., "The Recording and Collocation of Waveforms (Part 2)," Electronic Engineering, Morgan AO 34 Brothers Limited, Vol. 31, No. 374, pp. 204-212 (April 1959). Rein, H.M. and Zahn, M., "Subnanosecond-Pulse Generator with Variable Pulsewidth Using Avalanche ΑP 34 Transistors," Electronics Letters, IEE, Vol. 11, No. 1, pp. 21-23 (January 9, 1975). Riad, S.M. and Nahman, N.S., "Modeling of the Feed-through Wideband (DC to 12.4 Ghz) Sampling-Head," AQ 34 IEEE MTT-S International Microwave Symposium Digest, IEEE, pp. 267-269 (June 27-29, 1978). Rizzoli, V. et al., "Computer-Aided Noise Analysis of MESFET and HEMT Mixers," IEEE Transactions on AR <u>34</u> Microwave Theory and Techniques, IEEE, Vol. 37, No. 9, pp. 1401-1410 (September 1989). **EXAMINER** DATE CONSIDERED **EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

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	AA35	RE 3	35,829	06/1	998	San	ierford, Jr.	3	75	200	
	AB35	5,76	0,645	06/19	998	Com	te et al.	3	29	304	
	AC35	5,76	4,087	06/1	998	Clar	<	3	27	105	
	AD35	5,76	7,726	06/19	998	War	g	3	27	356	
	AE35	5,76	8,118	06/19	998	Faul	k et al.	3	63	72	
	AF35	5,77	1,442	06/19	998	Wan	g et al.	4	55	93	
····	AG35	5,77	7,692	07/19	998	Gho	sh	3	48	725	
	AH35	5,77	7,771	07/19	998	Smit	<u>h</u>	3	59	180	
	Al35	5,78	6,844	07/19	998	Rog	ers et al.	3	48	6	<u> </u>
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,	AJ35		-								Yes No
	AK35		-								Yes No
	AL35						·				Yes
<u> </u>	AM35										Yes
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	AN	<u>35</u>	Jersey, inclu	ding, fo	elmann, F.,	Chapte	nmunication Systems, er V, Pulse Modulation t of Antenna Size on C E, Vol. 19, No. 24, pp.	n Systems (1	965).	ons and Their	
			Dependence				_, νοι. 13, 140. 24, μμ.	1032-1034 (
	АР	<u>35</u>	Russell, R. a Proceedings	nd Hoa , Micro	are, L., "Milli wave Exhibi	meter tions a	Wave Phase Locked and Publishers, pp. 23	Oscillators," 8-242 (Octob	<i>Military I</i> er 25-27	Microwaves '7 ', 1978).	'8 Conference
	AQ	<u>35</u>		ions,"	The Institution	on of E	f a Robust Flexible Reingineers Australia Co , 1990).				
	AR	<u>35</u>	Salous, S., "I /, IEE, Vol. 1	IF digita 39, No	al generation . 3, pp. 281-	n of FN 288 (J	ICW waveforms for wune 1992).	rideband cha	nnel cha	racterization,	' IEE Proceedings
EXAMINER	<u> </u>		· .					DA	E CON	SIDERED	
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ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT DATE FILING DATE NAME **CLASS** SUB-NUMBER **CLASS** AA36 5,793,801 08/1998 Fertner 375 219 AB36 5,793,818 08/1998 375 Claydon et al. 326 AC36 5,802,463 09/1998 Zuckerman 455 208 AD36 5,809,060 09/1998 Cafarella et al. 375 206 AE36 5,818,582 10/1998 Fernandez et al. 356 318 AF36 10/1998 5,825,254 Lee 331 25 AG36 5,834,985 11/1998 Sundegard 332 100 AH36 5,864,754 01/1999 455 Hotto 280 03/1999 AI36 Bonds 5,881,375 455 118 **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-TRANSLATION **CLASS** AJ36 Yes No AK36 Yes No AL36 Yes Nο **AM36** Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) AN <u>36</u> "Sampling Loops Lock Sources to 23 Ghz," *Microwaves & RF*, Penton Publishing, p. 212 (September 1990). Sasikumar, M. et al., "Active Compensation in the Switched-Capacitor Biquad," Proceedings of the IEEE, IEEE, AO <u>36</u> Vol. 71, No. 8, pp. 1008-1009 (August 1983). Saul, P.H., "A GaAs MESFET Sample and Hold Switch," Fifth European Solid State Circuits Conference-ΑP <u>36</u> ESSCIRC 79, IEE, pp. 5-7 (1979). Shen, D.H. et al., "A 900-MHZ RF Front-End with Integrated Discrete-Time Filtering," IEEE Journal of Solid-AQ <u>36</u> State Circuits, IEEE Solid-State Circuits Council, Vol. 31, No. 12, pp. 1945-1954 (December 1996). Shen, X.D. and Vilar, E., "Anomalous transhorizon propagation and meteorological processes of a multilink AR 36 path," Radio Science, American Geophysical Union, Vol. 30, No. 5, pp. 1467-1479 (September-October 1995). **EXAMINER** DATE CONSIDERED **EXAMINER**: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

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ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER DOCUMENT** DATE CLASS FILING DATE INITIAL NAME SUB-NUMBER CLASS AA37 5,892,380 04/1999 Quist 327 172 **AB37** 5.894,239 04/1999 Bonaccio et al. 327 176 AC37 5,896,562 04/1999 Heinonen 455 76 AD37 5,900,747 05/1999 **Brauns** 327 9 AE37 5,901,054 05/1999 Leu et al. 363 41 AF37 375 347 5,901,187 05/1999 linuma AG37 5,901,344 05/1999 Opas 455 76 **AH37** 5,901,347 05/1999 Chambers et al. 455 234.1 **AI37** 5,901,348 05/1999 455 254 Bang et al. FOREIGN PATENT DOCUMENTS EXAMINER **DOCUMENT NUMBER CLASS** DATE COUNTRY SUB-**TRANSLATION** INITIAL **CLASS** AJ37 Yes Νo **AK37** Yes No AL37 Yes Nο Yes **AM37** No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Shen, X. and Tawfik, A.N., "Dynamic Behaviour of Radio Channels Due to Trans-Horizon Propagation AN <u>37</u> Mechanisms," Electronics Letters, IEE, Vol. 29, No. 17, pp. 1582-1583 (August 19, 1993). Shen, X. et al., "Modeling Enhanced Spherical Diffraction and Troposcattering on a Transhorizon Path with aid of the parabolic Equation and Ray Tracing Methods," IEE Colloquium on Common modeling techniques for AO <u>37</u> electromagnetic wave and acoustic wave propagation, IEE, pp. 4/1-4/7 (March 8, 1996). Shen, X. and Vilar, E., "Path loss statistics and mechanisms of transhorizon propagation over a sea path," AP 37 Electronics Letters, IEE, Vol. 32, No. 3, pp. 259-261 (February 1, 1996). Shen, D. et al., "A 900 MHZ Integrated Discrete-Time Filtering RF Front-End," IEEE International Solid State AQ <u>37</u> Circuits Conference, IEEE, Vol. 39, pp. 54-55 and 417 (February 1996). Spillard, C. et al., "X-Band Tropospheric Transhorizon Propagation Under Differing Meteorological Conditions," Sixth International Conference on Antennas and Propagation (ICAP 89) Part 2: Propagation, IEE, pp. 451-455 AR <u>37</u> (April 4-7, 1989). DATE CONSIDERED **EXAMINER EXAMINER**: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

conformance and not considered. Include copy of this form with next communication to Applicant.

Page 38 of 56 ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT DATE NAME CLASS SUB-FILING DATE NUMBER **CLASS** AA38 5,901,349 05/1999 Guegnaud et al. 455 302 AB38 05/1999 Miyatsuji et al. 5,903,178 327 308 AC38 5,903,187 05/1999 Claverie et al. 329 342 AD38 5,903,196 05/1999 Salvi et al. 331 16 **AE38** 5,903,421 05/1999 Furutani et al. 361 58 AF38 5,903,553 05/1999 Sakamoto et al. 370 338 AG38 5,903,595 05/1999 Suzuki 375 207 AH38 5,903,609 05/1999 Kool et al. 375 261 AI38 Kennan et al. 5,903,827 05/1999 455 326 FOREIGN PATENT DOCUMENTS EXAMINER INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-TRANSLATION CLASS AJ38 Yes No AK38 Yes No AL38 Yes No **AM38** Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Stafford, K.R. et al., "A Complete Monolithic Sample/Hold Amplifier," IEEE Journal of Solid-State Circuits, IEEE, AN <u>38</u> Vol. SC-9, No. 6, pp. 381-387 (December 1974). Staruk, W. Jr. et al., "Pushing HF Data Rates," *Defense Electronics*, EW Communications, Vol. 17, No. 5, pp. 211, 213, 215, 217, 220 and 222 (May 1985). AO <u>38</u> Stephenson, A.G., "Digitizing multiple RF signals requires an optimum sampling rate," Electronics, McGraw-Hill, AP 38 pp. 106-110 (March 27, 1972). Sugarman, R., "Sampling Oscilloscope for Statistically Varying Pulses," The Review of Scientific Instruments, AQ <u>38</u> American Institute of Physics, Vol. 28, No. 11, pp. 933-938 (November 1957). Sylvain, M., "Experimental probing of multipath microwave channels," Radio Science, American Geophysical AR <u>38</u> Union, Vol. 24, No. 2, pp. 160-178 (March-April 1989).

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Page 39 of 56 ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER** DOCUMENT INITIAL DATE NAME CLASS SUB-FILING DATE NUMBER CLASS **AA39** 5,903,854 05/1999 Abe et al. 455 575 AB39 5,905,449 05/1999 Tsubouchi et al. 340 925.69 AC39 5,907,149 05/1999 235 Marckini 487 AD39 5,907,197 05/1999 Faulk 307 119 AE39 5,911,116 06/1999 Nosswitz 83 455 AF39 5,911,123 06/1999 Shaffer et al. 455 554 AG39 5,914,622 06/1999 Inoue 327 172 AH39 5,920,199 07/1999 Sauer 324 678 A139 5,943,370 08/1999 Smith 375 334 **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-TRANSLATION CLASS AJ39 Yes No **AK39** Yes No AL39 Yes No **AM39** Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Takano, T., "NOVEL GaAs Pet Phase Detector Operable To Ka Band," IEEE MT-S Digest, IEEE, pp. 381-383 ΑN <u>39</u> (1984). Tan, M.A., "Biquadratic Transconductance Switched-Capacitor Filters," IEEE Transactions on Circuits and AO 39 Systems- I: Fundamental Theory and Applications, IEEE Circuits and Systems Society, Vol. 40, No. 4, pp. 272-275 (April 1993). Tanaka, K. et al., "Single Chip Multisystem AM Stereo Decoder IC," IEEE Transactions on Consumer AΡ 39 Electronics, IEEE Consumer Electronics Society, Vol. CE-32, No. 3, pp. 482-496 (August 1986). Tawfik, A.N., "Amplitude, Duration and Predictability of Long Hop Trans-Horizon X-band Signals Over the Sea," AQ 39 Electronics Letters, IEE, Vol. 28, No. 6, pp. 571-572 (March 12, 1992). Tawfik, A.N. and Vilar, E., "Correlation of Transhorizon Signal Level Strength with Localized Surface Meteorological Parameters," Eighth International Conference on Antennas and Propagation, Electronics Division AR <u>39</u> of the IEE, pp. 335-339 (March 30- April 2, 1993).

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FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615

APPLICANT Sorrells et al. GROUP

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EXAMINER INITIAL			CUMENT MBER	DAT	E	NAM	IE		CLASS	SUB- CLASS	FILING DATE
	AA40	4,01	17,798	04/1	977	Gord	ly et al.		325	42	
	AB40	4,03	32,847	06/1	977	Unka	auf		325	323	
	AC40	4,25	53,067	02/1	981	Capi	es <i>et al</i> .		329	110	
-	AD40	4,39	93,395	07/1	983	Haci	ke et al.		358	23	
- ,	AE40	4,81	16,704	03/1	989	Fiori	Jr.		307	519	
	AF40	4,84	11,265	06/1	989	Wat	anabe et al.		333	194	
	AG40	4,94	13,974	07/19	990	Mota	medi		375	1	
	AH40	5,11	5,409	05/1	992	Step	p	···	364	841	
	AI40	5,35	3,306	10/1	994	Yam	amoto		375	14	
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	AJ40										Yes No
	AK40	<u> </u>			_						Yes No
	AL40										Yes No
	AM40										Yes No
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	AN	<u>40</u>	Tawfik, A.N. International 4-7, 1989).	and Vil Confei	lar, E., "Dyna rence on Ant	amic S	tructure of a Transhoriz and Propagation (ICAF	on Sigr P 89) Pa	nal at X-band art 2: Propag	d Over a Sea ation, IEE, p	Path," <i>Sixth</i> p. 446-450 (April
,	AO	<u>40</u>	Tawfik, A.N. Path," <i>Electr</i> o	and Vil	lar, E., "Stati etters, IEE, '	stics o	f Duration and Intensity 5, No. 7, pp. 474-476 (M	of Path larch 29	n Loss in a N 9, 1990).	ficrowave Tr	anshorizon Sea-
	АР	<u>40</u>	Path Loss, D	uration	of Events, a	and Th	anshorizon Measuremer eir Modeling," <i>IEEE Tra</i> bl. 41, No. 11, pp. 1491-	nsactio	ns on Anten	nas and Proj	ne Sea- Part 1: pagation, IEEE
	AQ	<u>40</u>	Temes, G.C.	and Ts	sividis, T., "T 3, pp. 915-91	he Sp 6 (Aug	ecial Section on Switch gust 1983).	ed-Cap	acitor Circui	ts," <i>Pr</i> oceedi	ngs of the IEEE,
	AR	<u>40</u>	Thomas, G.B	., Calc	ulus and Ana	alytic (Geometry, Third Edition	, Addiso	on-Wesley P	ublishing, pp	. 119-133 (1960).
EXAMINER			<u> </u>						DATE CONS	SIDERED	

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	AA41	5,5	15,014	05/1	996	Tro	utman	332	178	
	AB41		63,550	10/1	996	Tot		329	347	
·	AC41		74,755	11/1		 	sico	375	295	
	AD41	_	04,592	02/19		 	idis <i>et al.</i>	356	357	
	AE41		38,396	06/19		Klin		372	92	
	AF41 AG41		75,392	10/19			rebi et al.	348	584	-
	AH41		94,096 57,870	05/19		 	niroku et al.	333	195 367	
	Al41	_	58,323	06/19			a et al. eger et al.	375	355	
	17041	10,10	30,323	100/1			TENT DOCUMENTS	1373	1333	<u> </u>
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	AJ41									Yes No
	AK41									Yes No
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 :	AM41						,			Yes
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	AO	<u>41</u>	and Publishe Tortoli, P. et Transactions	rs, pp. al., "Bi on Ult	754-759 (Se	epten Oopple	ave Mixer," 16 th European Micenber 8-12, 1986). er Signal Analysis Based on a ectrics, and Frequency Control No. 1, pp. 1-3 (January 1984).	Single RF Sal	mpling Chanr	nel," <i>IEEE</i>
	АР	<u>41</u>	Tsividis, Y. a (1985).	nd Ant	ognetti, P. (E	Ed.), ≀	Design of MOS VLSI Circuits	for Telecommu	<i>unications</i> , Pr	entice-Hall, p. 304
	AQ	<u>41</u>	Tsividis, Y., " IEEE, Vol. 71	Princip	oles of Opera 3, pp. 926-94	ation 10 (Au	and Analysis of Switched-Cap ugust 1983).	acitor Circuits	," Proceeding	s of the IEEE,
	AR	41	and 2.6 Ghz	Band F	Radio Comm	unica	Study on a Direct Conversion ation Systems," 41 [#] IEEE Veh 57-462 (May 19-22, 1991).	Receiver Fron icular Technol	at-End for 280 ogy Conferen	MHZ, 900 MHZ, ace, IEEE
EXAMINER		L	L			_		DATE CON	SIDERED	

Page 42 of 56 ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP March 14, 2000 2631 **U.S. PATENT DOCUMENTS** EXAMINER INITIAL **DOCUMENT** DATE NAME CLASS SUB-FILING DATE NUMBER **CLASS** AA42 5,770,985 Ushiroku et al. 06/1998 333 193 AB42 5,778,022 07/1998 Walley 375 206 AC42 5,812,546 09/1998 Zhou et al. 370 342 AD42 5,818,869 10/1998 Miya et al. 375 206 AE42 5,844,449 12/1998 Abeno et al. 332 105 AF42 5,872,446 02/1999 Cranford, Jr. et al. 323 315 AG42 5,909,447 06/1999 Cox et al. 370 508 AH42 5,933,467 08/1999 Sehier et al. 375 350 5,952,895 Al42 09/1999 McCune, Jr. et al. 332 128 FOREIGN PATENT DOCUMENTS **EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY **CLASS** SUB-TRANSLATION **CLASS** AJ42 Yes No AK42 Yes No AL42 Yes No AM42 Yes Nο OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Valdmanis, J.A. et al., "Picosecond and Subpicosend Optoelectronics for Measurements of Future High Speed AN 42 Electronic Devices," IEDM Technical Digest, IEEE, pp. 597-600 (December 5-7, 1983). van de Kamp, M.M.J.L., "Asymmetric signal level distribution due to tropospheric scintillation," Electronics AO 42 Letters, IEE, Vol. 34, No. 11, pp. 1145-1146 (May 28, 1998). Vasseur, H. and Vanhoenacker, D., "Characterization of tropospheric turbulent layers from radiosonde data." ΑP <u>42</u> Electronics Letters, IEE, Vol. 34, No. 4, pp. 318-319 (February 19, 1998). Verdone, R., "Outage Probability Analysis for Short-Range Communication Systems at 60 Ghz in ATT Urban AQ <u>42</u> Environments," IEEE Transactions on Vehicular Technology, IEEE Vehicular Technology Society, Vol. 46, No. 4, pp. 1027-1039 (November 1997). Vierira-Ribeiro, S.A., Single-IF DECT Receiver Architecture using a Quadrature Sub-Sampling Band-Pass AR <u>42</u> Sigma-Delta Modulator, Thesis for Degree of Master's of Engineering, Carleton University, UMI Dissertation Services, pp. 1-180 (April 1995).

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	AA43	5,96	60,033	09/19	999	Shib	ano et al.	3	75	207	
	AB43	6,04	1,073	03/2	000	Davi	dovici et al.	3	75	148	09/18/1998
	AC43	6,05	4,889	04/2	000	Koba	ıyashi	3	27	357	11/11/1997
<u>.</u> .	AD43	6,08	4,922	07/20	000	Zhou	et al.	3	75	316	04/16/1998
•	AE43	6,12	5,271	09/20	000	Row	and et al.	4	55	313	03/06/1998
	AF43	6,14	7,340	11/20	000	Levy		2	50	214 R	09/29/1998
	AG43	_	7,763	11/20		Steir	lechner	3	56	484	12/27/1999
	AH43	1	0,890	11/20	000	Dam	gaard <i>et al</i> .	3	31	14	09/30/1998
· · · · · ·	Al43	5,12	6,682	06/19	992	Weir	berg et al.	3	29	304	<u> </u>
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	AJ43										Ye:
	AK43										Yes No
	AL43										Yes No
	AM43										Yes
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-	AN	43	International 17, 1997). Vilar, E. et al	Confei	ystem to Me	easure	ective MM-Wave Satellit and Propagation, Electron LOS Atmospheric Trans	ronics Divi	sion of th	ne IEE, pp. 2.	98-2.101 (April 14-
	AO	<u>43</u>	pp. 8-1 - 8-16				of the Lower Atmospher	re Influenc	ing Radio	Wave Propa	agation, AGARD,
	АР	<u>43</u>	Vilar, E. and IEEE Transa	Smith,	H., "A Theo on Antennas	oretical s and F	and Experimental Study Propagation, IEEE, Vol. /	of Angula AP-34, No	ar Scintilli . 1, pp. 2	ations in Eart -10 (January	h Space Paths," 1986).
	AQ	<u>43</u>					rizon Experiment at 11.6 s Division of the IEE, pp				
	AR	<u>43</u>	Vilar, E. and 8, No. 20, pp				de Dependence of Frequ 72).	uency in C	Scillators	s," Electronics	s Letters, IEE, Vol
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Page 44 of 56 ATTY. DOCKET NO. APPLICATION NO. 1744.0450003 09/525,615 FORM PTO-1449 APPLICANT Sorrells et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE March 14, 2000 2631 **U.S. PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT DATE CLASS NAME SUB-FILING DATE NUMBER CLASS AA44 5,841,811 11/1998 Song 375 235 AB44 4,051,475 343 09/1977 Campbell 180 AC44 5,953,642 09/1999 Feldtkeller et al. 455 195.1 AD44 4,653,117 03/1987 Heck 455 209 AE44 5,859,878 01/1999 Phillips et al. 375 316 AF44 5,894,496 04/1999 Jones 455 126 AG44 5,915,278 06/1999 Mallick 73 658 AH44 6,028,887 02/2000 Harrison et al. 375 206 Renard et al. A144 6.081,691 06/2000 455 12.1 04/14/1998 **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY **CLASS** SUB-TRANSLATION CLASS AJ44 Yes No AK44 Yes No AL44 Yes No **AM44** Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Vilar, E. et al., "An experimental mm-wave receiver system for measuring phase noise due to atmospheric AN <u>44</u> turbulence," Proceedings of the 25th European Microwave Conference, Nexus House, pp. 114-119 (1995). Vilar, E. and Burgueño, A., "Analysis and Modeling of Time Intervals Between Rain Rate Exceedances in the Context of Fade Dynamics," *IEEE Transactions on Communications*, IEEE Communications Society, Vol. 39, AO 44 No. 9, pp. 1306-1312 (September 1991). Vilar, E. et al., "Angle of Arrival Fluctuations in High and Low Elevation Earth Space Paths," Fourth International AP <u>44</u> Conference on Antennas and Propagation (ICAP 85), Electronics Division of the IEE, pp. 83-88 (April 16-19, 1985). Vilar, E., "Antennas and Propagation: A Telecommunications Systems Subject," Electronics Division Colloquium AQ <u>44</u> on Teaching Antennas and Propagation to Undergraduates, IEE, pp. 7/1-7/6 (March 8, 1988). Vilar, E. et al., "CERS*. Millimetre-Wave Beacon Package and Related Payload Doppler Correction Strategies," AR Electronics Division Colloquium on CERS- Communications Engineering Research Satellite, IEE, pp. 10/1-10/10 <u>44</u> (April 10, 1984). **EXAMINER** DATE CONSIDERED

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	AA45	6,12	21,819	09/2	000	Tray	lor	32	.7	359	04/06/1998
	AB45	6,14	14,236	11/2	000	Vice	et al.	32	27	113	02/01/1998
	AC45	6,14	14,846	11/2	000	Dure	С	45	5	323	12/31/1997
	AD45	6,17	75,728 B1	01/2	001	Mita	ma	45	5	323	03/03/1998
	AE45	5,70)5,949	01/19	998	Alely	unas et al.	32	9	304	
	AF45	5,88	33,548	03/1	999	Assa	rd et al.	32	9	306	
	AG45	4,48	34,143	11/19	984	Fren	ch <i>et al.</i>	32	9	. 50	
	AH45	5,84	11,324	11/19	98	Willia	ams	33	1	17	
	Al45	4,85	55,894	08/19	989	Asah	i et al.	36	3	157	
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	AN	<u>45</u>	Vilar, E. and I Electronics Le	Mouisi etters,	ey, T.J., "Co IEE, Vol. 21	mmen , No. 1	t and Reply: Probability 4, pp. 620-622 (July 4,	Density Fu 1985).	nction o	f Amplitude S	cintillations,"
	AO	<u>45</u>					l Rate Duration Distributi -1924 (September 24, 19		-IFE an	d Barcelona,	' Electronics
	AP	<u>45</u>	Vilar, E., "Dep No. 9, pp. 732				nsmittances in Indoor C	ommunicat	ions," <i>E</i>	lectronics Le	tters, IEE, Vol. 27,
	AQ	<u>45</u>	Vilar, E. and L Paths," <i>Sixth</i> 150-154 (Apri	Interna	ational Confe	ation [erence	Dependence of Amplitude on Antennas and Propa	e Scintillation	ons on l NP 89) F	Low Elevation Part 2: Propag	Earth Space pation, IEE, pp.
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INFORMATION DISCLOSURE STATEMENT

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	AA46	5,319,	799	06/19	994	Morit	a		455	78	
	AB46	5,801,	654	09/19	98	Tray	or		341	144	
	AC46	5,369,	404	11/19	994	Galto	n		341	143	
	AD46	3,716,	730	02/19	73	Cern	y, Jr.		307	295	<u> </u>
	AE46	4,080,	573	03/19	78	How	ell		325	439	
	AF46	4,334,	324	06/19	82	Hoov	er		455	333	
	AG46	4,369,	522	01/19	983	Cern	y, Jr. et al.		455	333	
	AH46	5,465,	418	11/19	995	Zhou	et al.		455	332	
	A146	5,513,	389	04/19	996	Rees	er et al.		455	311	
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	AJ46										Yes No
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	AP						ement of Phase Fluctua 3, pp. 566-568 (Septem			Radiowave F	Propagation,"
	AQ	46	Vilar, E. and Millimetre Ba 5/1-5/8 (Janu	nd," <i>Ei</i>	lectronics Di	ow and ivision	Wide Band Estimates Colloquium on Radioco	of Field S ommunica	trength for tions in the	Indoor Comr Range 30-6	nunications in the 0 Ghz, IEE, pp.
-	AR	<u>46</u>	Vilar, E. and Limitations," 23, 1986).	Faulkn <i>Electr</i> o	er, N.D., "Pi onics Divisio	hase N	loise and Frequency St oquium on Low Noise O	ability Me	asuremen and Synth	ts. Numerica esizer, IEE, t	Techniques and pages (January
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	AA47	5,95	59,850	09/1	999	Lim		363		17	
	AB47	5,15	57,687	10/19	992	Tym	es	375	<u> </u>	1	
	AC47		15,660	08/19		+	isuji <i>et al</i> .	235		462.46	
- · · · · · · · · · · · · · · · · · · ·	AD47		91,939	07/20		Bank		455		102	02/18/1997
·	AE47		91,941	07/20		+	yama et al.	455		126	11/16/1998
	AF47		98,886	08/20		+	et al.	235		472.01	01/21/1998
	AG47 AH47	_	15,475 B1	04/20		+	erson et al.	345		173	06/07/1995
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	AJ47										Yes No
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	AO	<u>47</u>	(Barcelona)	and Tro	pical (Beler	n) Reg	ions," <i>Tenth Internationa</i> 30-2.233 (April 14-17, 1	al Conferenc	e on An	tennas and	Propagation,
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	AQ	<u>47</u>	Vilar, E., "So on Satellite (1975).	ome Lim Commu	nitations on l nication Sys	Digital stems 1	Transmission Through T Fechnology, Electronics I	urbulent Atr Division of th	nosphe ne IEE,	re," <i>Internati</i> pp. 169-187	onal Conference (April 7-10,
	AR	<u>47</u>	Vilar, E. and International 1978).	Matthe Confer	ws, P.A., "S ence on An	iumma tennas	ry of Scintillation Observ and Propagation Part 2:	rations in a 3 Propagation	6 Ghz I 1, IEE, _I	_ink Across op. 36-40 (N	London," ovember 28-30,
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	AA48	6,061,555	05/2	000	Bultn	nan <i>et al.</i>	455		313	10/21/1998
	AB48	6,091,940	07/2	000	Sorre	lls et al.	455		118	10/21/1998
	AC48	6,266,518 B1	07/2	001	Sorre	lls et al.	455		118	08/18/1999
	AD48	6,353,735 B1	03/2	002	Sorre	lls et al.	455		118	08/23/1999
	AE48	6,370,371 B1	04/2	002	Sorre	lls et al.	455		323	03/03/1999
	AF48	09/525,185			Sorre	lls et al.				03/14/2000
	AG48				<u> </u>					
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	AJ48	AJ48								Yes
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	AN	Antenna Vollmer,	s and Prop	elete GPS Re	ctronic	ation of Scattering Cha s Division of the IEE, pp Fits on Two Chips," <i>Ele</i>	o. 2.353-2.356	3 (April 1	4-17, 1997).
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	AJ49									Yes No
	AK49	<u> </u>								Yes No
	AL49									Yes No
	AM49					-				Yes No
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	АР	<u>49</u>	Watson, A.W Receivers," <i>D</i> 367-373 (Apri	igital F	Processing o	f Sign	sion and Signal Processing als in Communications, Inst	for High Perfor itution of Electro	mance Comr onic and Rad	nunications io Engineers, pp.
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ATTY. DOCKET NO. 1744.0450003	APPLICATION NO. 09/525,615
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	AJ53					- 4					Yes No
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	AM53		· · · · · · · · · · · · · · · · · · ·								Yes No
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	AL54										Yes No
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